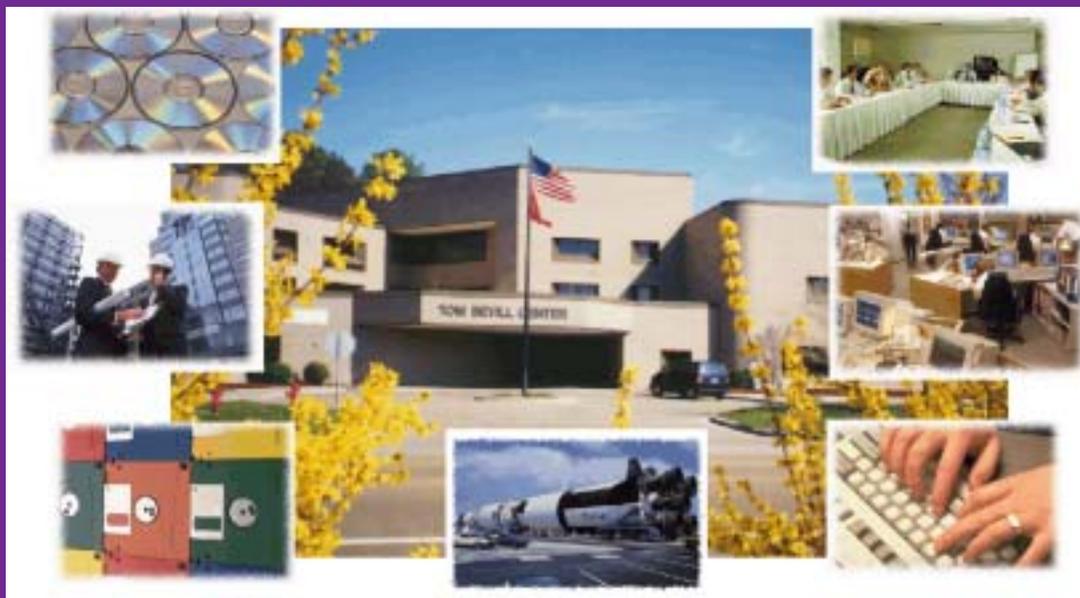




**US Army Corps  
of Engineers**

USACE Professional  
Development Support  
Center (PDSC)

# The Purple Book and PROSPECT Training Needs Survey FY2005



**MANAGERS  
AND SUPERVISORS  
TRAINING HANDBOOK**

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## HOW TO USE THIS HANDBOOK

Training is a vital part of any organization. This has never been more true than in this time of accelerated change. Training needs change as the organization changes. Government downsizing has changed peoples' jobs to include new tasks and responsibilities. Training is needed to ensure success. To be effective, an organization's training system should be at least as dynamic as the organization. This handbook is issued as a tool to help satisfy those needs.

This handbook is divided into 7 sections. Section 1 contains instructions on how to submit your FY05 training requirements; training information assisting the supervisor in using the handbook effectively; a Continuing Education Credits listing; and a listing of PROSPECT courses by Community of Practice. Sections 2 through 6 of this handbook describe courses available to Corps of Engineers and other Government agency employees from various sources. Section 7 is for Corps of Engineers use only. Each section has specific school information about where, cost, how to apply, and who to contact. Use the course purpose, description, and prerequisites to guide in your selection of courses best adapted to individual needs by answering such questions as:

- What does this employee need to know or be able to do?
- Is the employee ready for this course?
- Has this employee already had this course or learned the skills the course will provide?

**FY2005 SURVEY INSTRUCTIONS**

1. Use this catalog to determine your FY2005 training requirements for the Proponent Sponsored Engineer Corps Training (PROSPECT) Program courses. The catalog contains our projected schedule of classroom courses for FY2005.

- Section 1: General Information.
- Section 2: PROSPECT Training
- Section 3: Additional Distance Learning Information
- Section 4: Installation Support Training
- Section 5: Federal Executive Institute (FEI) and Executive Seminar Center (ESC) Training
- Section 6: Long Term Training
- Section 7: Army Service Schools and Defense Management Education and Training (DMET) (Corps Only)

2. Reporting Requirements for Classroom Sessions. Procedures for requesting quotas are distributed separately by your training coordinator. Division and District training coordinators will consolidate requirements and submit them electronically to the Professional Development Support Center (PDSC). Organizations who are unable to submit their requests electronically should complete the enclosed form and mail it to the Chief, USACE Professional Development Support Center, ATTN: CEHR-P-RG, PO Box 1600, Huntsville, AL 35807-4301. Each request for a space allocation will be submitted utilizing the priority system established by Headquarters, U.S. Army Corps of Engineers (HQUSACE):

<i><b>PRIORITY</b></i>	<i><b>DESCRIPTION</b></i>	<i><b>EXPLANATION</b></i>
0	Mandatory Training	Mandated by regulation or higher headquarters.
1	Training - Skills, knowledges, and abilities needed now.	Planned utilization is now (next 6-12 months); therefore the training must be taken in the ensuing annual training cycle.
2	Education - Skills, knowledges and abilities needed.	Planned utilization is soon (12-24 months); therefore, the education should be taken in the ensuing annual training cycle or deferred until the following training cycle.
3	Development - Skills, knowledges, and abilities needed in the future.	Planned utilization is in the future (more than 24 months); therefore, the development may be taken in the ensuing annual training cycle, but can be deferred to some future training cycle.

3. Requests for onsite training sessions should be submitted to PDSC using the form on Page 1-5. Note that onsite sessions require near normal class sizes, i.e., a course with a class size of 35 students should have an onsite requirement of at least 25 students to effectively utilize required resources. Students enrolled in individual PROSPECT courses should not be included in onsite requests.
4. Tuition Billing System.
  - a. The FY2005 PROSPECT program continues the "pay as you go" tuition system. This system is derived by each course paying for itself. Each course tuition is calculated by adding instructional costs plus overhead costs and dividing the total by the projected number of students. USACE PDSC staff salaries are included in overhead costs. In most cases, no additional funding is provided.

- b. Each organization pays tuition for the quotas requested and travel and per diem for their students to attend the course. Provided there are no date and location changes, your organization's student enrollment is a commitment to pay for those spaces allocated. You must obligate funds for training spaces when you request them. **Payment for PROSPECT training for Corps employees is now mandatory via the IMPAC card.** We strongly recommend that your approving training coordinators become IMPAC credit card holders with authority to purchase up to \$2,500 minimum and that you identify an individual in your organization with super authority who can pay for tuitions that are more than \$2,500 (often occurring with onsite courses). Acceptable payment methods for onsite sessions also include DD Form 1556 and Military Interdepartmental Purchase Request (MIPR). Credit card payment by other agencies is also available. The DD Form 1556 remains an individual organizational requirement to document all training. Bills for tuitions paid by DD Form 1556 will be processed monthly, following completion of training, through the USACE Finance Center. Our 30-day no penalty cancellation policy remains in effect.
  - c. Non-Federal Government agencies (state or local) must prepay tuition not later than 30 days prior to the course start date.
5. We use the survey data collected to determine the size of the FY2005 program and its budget requirements. Therefore, it is important that you input as many of your training requirements as possible during this time frame.
  6. Course descriptions contain prerequisites required for a specific course. It is the supervisor's responsibility to assure that course enrollees or substitute enrollees meet all listed requirements. Students not meeting the course prerequisites must submit an online request for waiver of a prerequisite to CEHR-P-RG prior to taking the class.
  7. **Training coordinators may cancel enrollments online anytime up to 30 days prior to the start date of the class.** Cancellations received less than 30 days prior to the class start date for which no qualified standby student is available and no-shows will be billed for the applicable tuition. The online Registrar's Office maintains a standby list for courses and most cancelled quotas can be filled if the cancellation is provided promptly. Your support in this policy assists us in maintaining the lowest possible tuition rates and in providing training to as many students as possible. Your credit card will not be charged unless the cancellation is within the 30-day no-cancellation window. In this case, the tuition charge will be processed and the registrar's office will notify you.
  8. Any questions regarding registration program should be referred **through local training coordinators** to:
    - a. Janice Perry, CE Registrar Division (CEHR-P-RG), by telephone at 256-895-7464, by fax at 256-895-7778, or by e-mail at [Janice.J.Perry@usace.army.mil](mailto:Janice.J.Perry@usace.army.mil).
    - b. Specific course registration information questions should be referred to Sherry Whitaker by telephone at 256-895-7425, by fax at 256-895-7469, or by e-mail at [Sherry.M.Whitaker@HND01.usace.army.mil](mailto:Sherry.M.Whitaker@HND01.usace.army.mil), or to
    - c. Bobbi Stoddard at telephone number 256-895-7421, by fax at 256-895-7469, or by e-mail at [Roberta.Stoddard@HND01.usace.army.mil](mailto:Roberta.Stoddard@HND01.usace.army.mil).
    - d. Questions regarding billing may be referred to Philip Grames by telephone at 256-895-5742, by fax at 256-895-7469, or by e-mail at [Philip.Grames@HND01.usace.army.mil](mailto:Philip.Grames@HND01.usace.army.mil).
    - e. If you are having technical problems logging into TMIS, receiving your password, or entering your course information, you may contact Steve Johnson by telephone at 256-895-7471 or by e-mail at [Steve.Johnson@HND01.usace.army.mil](mailto:Steve.Johnson@HND01.usace.army.mil).
  9. This publication and its updates, credit card procedures, and a Frequently Asked Questions (FAQ) section will be viewable and downloadable from the PDSC internet site at <http://pdsc.usace.army.mil>.



# Onsite Training Request

To: CEHR-P-RG

From:

<b>Course Title</b>	<b>Ctrl. No.</b>	<b>No. Students</b>	<b>Suggested Dates</b>

**FY2005 PROSPECT PROGRAM SCHEDULE**

Following is a complete list of courses/sessions being offered in FY2005. The courses are listed alphabetically by short title. Also provided is the course number, control number, class size, Continuing Education Units (CEUs) if appropriate, tuition amounts, and proposed locations and dates of each course and session listed. When the location is annotated "TBD" (to be determined) and the dates are blank, this information will be provided as soon as it is available.

Due to the implementation of the Army Standardized Course Numbering System, the course numbers in column one are required for Defense Civilian Personnel Data Systems (DCPDS). The three-digit control number is required for our local automated tracking system.

The regional concept for scheduling locations of the classroom courses includes four regions: Western, Central, Northeastern, and Southeastern. Cities designated within the respective areas as the regional centers are:

WESTERN REGION	CENTRAL REGION	NORTHEASTERN REGION	SOUTHEASTERN REGION
Portland, OR	Dallas/Ft. Worth, TX	Annapolis/Baltimore, MD	Atlanta, GA
Sacramento, CA	Denver, CO	Norfolk/Virginia Beach, VA	Huntsville, AL
Seattle, WA	St. Louis, MO	Washington, DC	Jacksonville, FL
Albuquerque, NM			New Orleans, LA
Phoenix, AZ			

Although most sessions surveyed will be held at these locations, there are a few exceptions: (a) site dependent courses, approximately 1/3 of the program, are excluded from this scheduling requirement (i.e., Vicksburg, Mississippi (WES); Davis, California (HEC); and Duck, North Carolina), and (b) courses in which a large number of applicants are from a city other than a designated regional center, (i.e., Omaha, Nebraska in the Central Region) may be scheduled in that city.

Priority consideration is given to placement of classes in the Bevill Center in Huntsville, Alabama, the Corps training facility.

Prospective students are encouraged to select the session closest to their assigned duty station. Cooperation of all parties - proponents, instructors, training coordinators, managers, and students - is needed to secure the benefits of lower travel costs through regional scheduling.

## TRAINING INFORMATION

1. Laws and Regulations.
  - a. The Government Employees Training Act (PL 85-507), known as GETA. A copy of this Act may be obtained from your training coordinator.
  - b. The Army Regulation, known as AR 690, Chapter 410. A copy of this regulation may be examined in the personnel division or the training office.
  - c. Individual Division/District/Activity Procedures or Regulations. A copy of these regulations may be examined in the personnel division or the training office.
2. Definition of Training.
  - a. Training is defined as the process of making available to an employee a planned and coordinated educational program of instruction in various fields which are or will be directly related to the performance of the employee's official duties for the government. This educational program should effectively increase the knowledge, proficiency, ability, skill, and qualifications of the employee in the performance of official duties.
  - b. Official duties means the authorized duties which an employee is currently performing or those which he could reasonably be expected to perform in the future. This includes potential duties in a different job or occupation at the same or higher level than one currently held by the employee.
3. Principal Purpose of Training. The principal purpose of training is to provide the knowledges and skills needed:
  - a. As a result of agency mission or program changes.
  - b. As a result of new technology.
  - c. As a result of new work assignments.
  - d. To improve present performance.
  - e. To meet future staffing needs.
  - f. To develop unavailable skills.
  - g. To meet the requirements for journeyman status in an apprenticeship program.
  - h. To provide orientation for new employees.
  - i. To provide adult basic education.
4. Training Facilities. The Government Employees Training Act provides for training of employees through either government or nongovernment facilities. However, training employees through nongovernment facilities is authorized only after the department head determines that adequate training through a government facility is not reasonably available. Further, each department shall provide for training, insofar as practicable, through those government facilities which are under the jurisdiction or control of the department.
5. Length and Types of Training. The Office of Personnel Management considers any training under 120 days to be short term training, while training over 120 days is long term training.
6. Payment of Training Expenses. The Government Employees Training Act authorizes the head of each department:
  - a. To pay all or any part of the salary, pay, or compensation (excluding overtime, holiday, and night differential pay) of each employee selected and assigned for training through government or nongovernment facilities for each period of training.
  - b. To pay or reimburse the employee for all or any part of the necessary expenses of each training assignment including the necessary costs of travel and per diem in lieu of subsistence; transportation of immediate family, household goods, and personal effects whenever the estimated cost of such transportation and related services is less than the estimated aggregate per diem payments for the period of training; tuition and matriculation fees; library and laboratory services; purchase or rental of books, materials, and supplies; and other services or facilities directly related to the training of the employee.
7. **Limitation on Training in Nongovernment Facilities.**
  - a. Man-Year. The Government Employees Training Act provides that the number of man-years of training per department through nongovernment facilities in any fiscal year shall not exceed 1 per cent of the total number of man-years of civilian employment for each department in the same fiscal year.

- b. **Minimum Continuous Service.** No employee having less than 1 year of current, continuous civilian service in the government shall be eligible for training through nongovernment facilities unless the head of the department determines that such training is in the public interest. Exceptions to this requirement include short courses, correspondence courses, apprenticeship training, etc.
  - c. **Maximum Training in a 10-Year Period.** In the first 10-year period of the employee's continuous or noncontinuous civilian service in the government following the date of the initial entry into the civilian service of the government and in each 10-year period of service occurring thereafter, the time spent by an employee in training through nongovernment facilities shall not exceed 1 year.
  - d. **Academic Degree Restrictions.** GETA states that nothing contained in this Act shall be construed to authorize the selection and assignment of any employee for training through any nongovernment facility under authority of this Act, or the payment or reimbursement by the government of the costs of such training, either:
    - (1) For the purpose of providing an opportunity to such employee to obtain an academic degree in order to qualify for appointment to a particular position.
    - (2) Solely for the purpose of providing an opportunity to an employee to obtain one or more academic degrees. This prohibition of training for the sole purpose of attaining a degree is not to be construed as limiting the authority of an agency to assign employees to training in nongovernment facilities when the training is for the purpose of developing those skills, abilities, and knowledges which will best qualify them for the performance of official duties. If, in the accomplishment of this training, an employee receives an academic degree, this may be considered as merely an incidental by-product of the training.
  - e. **Training for Promotion.** Training an employee through a nongovernment facility for the purpose of filling a position by promotion is prohibited if there is another employee within the department who has equal ability and suitability and is fully qualified to fill the position and who is available at or within a reasonable distance from the place where the duties of the position are to be performed. Since this requires department-wide consideration, an agency shall request all other agencies to refer employees considered fully qualified and available for the position in the area of consideration. The area of consideration need not be greater than the local commuting area of the position.
  - f. **Continued Service Agreements.** Each employee who is selected for training through a nongovernment facility under authority of GETA shall, prior to the actual assignment for training, enter into a written agreement with the government to the effect that:
    - (1) After the expiration of the period of training the employee will continue in the service of the department for a period of at least equal to three times the length of the period of training unless involuntarily separated from the service of the department.
    - (2) If the employee is voluntarily separated from the service of the department prior to the expiration of the period for which the employee has agreed to continue in the service of the department after such training, the employee will pay the government the amount of the additional expenses incurred by the government in connection with his training. No employee selected for such training shall be assigned thereto unless he has entered into such agreement.
8. **Responsibility for Training.**
- a. Managers are responsible for training their subordinates. If an employee fails an assignment because of the lack of training, the supervisor is held responsible and not the employee. It is the supervisor's responsibility to ask the superior or available personnel technician for assistance needed. Each activity should encourage employee self-development by providing suitable recognition of improvements in performance that result from training.
  - b. The basic responsibility for each employee's development rests with the employee. Each employee is encouraged to show initiative in training opportunities and to demonstrate improvements that result from training. When an employee is selected for training, he/she is obligated to give the best thought and effort to that training.

9. Selection for Training.

- a. Each agency must establish procedures necessary to insure that:
  - (1) In the selection of employees for training, there is no discrimination because of race, color, religion, sex, national origin, age, or other factors unrelated to the need for training.
  - (2) Eligible employees will have a reasonable opportunity for consideration in selection for training which is to result in promotion. Merit promotion procedures must be followed in selecting career or career-conditional employees for training that is given primarily to prepare trainees for advancement and that is required for promotion. These requirements have been established in the interests of fair and equitable treatment of employees as required by the law and principles underlying the Federal Merit Promotion Program.
- b. Factors such as the following may be considered in selecting from among those who might be trained:
  - (1) The relative degree of employees' need for training.
  - (2) The relative potential of employees for advancement.
  - (3) The relative extent to which employees' knowledge, skill, attitudes, or performance are likely to be improved by training.
  - (4) The relative ability of employees to pass training to others upon returning to the job.
  - (5) The relative length of time and degree to which the agency expects to benefit from the employees' improved knowledge, skills, attitudes, and performance.
  - (6) Training opportunities previously afforded employees by the agency.
  - (7) The employees' own interest in and efforts to improve their work.

**CONTINUING  
EDUCATION CREDITS**

Many state and other certifying and licensing bodies are now requiring continuing education credits in order to maintain licenses and certification. The various continuing education credits are a means through which qualified, noncredit-granting organizations provide their students a standardized system for measuring their courses.

There are no national criteria for most professions. Criteria are generally established by individual states and certifying or licensing bodies. Each state, licensing body, or certifying body makes its own determination as to what the requirements are and which training qualifies. There is no guarantee that a state, certifying body, or licensing body will accept the training for continuing education credit. However, the fact that credits have been earned in accordance with established, stringent criteria created by national professional organizations should positively influence the body's decision.

To aid the professionals who take Proponent Sponsored Engineer Corps Training (PROSPECT) courses to earn required credits while participating in high quality programs taught by practicing professionals, the PROSPECT Program has undergone a rigorous certification/registration process by the professional organizations listed below in order to award the stated types of continuing education credited for select PROSPECT courses:

CEU (Continuing Education Unit): The USACE Professional Development Support Center meets the criteria for Certified Provider established by the Certified Provider Commission of the International Association for Continuing Education and Training, 1620 I Street, NW, Washington, DC 20006.

LU (Learning Unit): The USACE Professional Development Support Center meets the criteria for Registered Provider established by the American Institute of Architects Continuing Education System, 1735 New York Avenue, NW, Washington, DC 20006.

PDH (Professional Development Hour): The USACE Professional Development Support Center meets the criteria for Registered Provider established by the National Society for Professional Engineers, 1420 King Street, Alexandria, VA 22314.

The PROSPECT courses listed on the next page(s) meet the criteria for CEU, LU, and/or PDH. The course description for each of these courses (Managers and Supervisors Training Handbook) also lists the credits that are given for that particular course. Additionally, course completion certificates show the type and number of credits earned. Managers and employees should consider these courses as a source of training to meet continuing education requirements when developing a member's Individual Development Plan.

For additional information about these continuing education and training credits, visit our website at: <http://pdsc.usace.army.mil>.

**COURSES APPROVED FOR CEUS**

Title	Crs #	CEUs	LUs	PDHs
A-E Contracting	004	3.1	34	31
Adv Steady Flow w/HEC-RAS	067	3.1		31
Adv Streambank Prot	394	3.2	32	
Arch Hardware-QV	003		28	
Budget Training	254	3.3		
CE Contract Law	342	2.8		28
CERCLA/RCRA Process	356	2.1		21
Coastal Ecology	263	2.6		
Coastal Engineering	013	2.7		27
Coastal Project Planning	011	2.8		28
Concrete Const Insp Certif	332		30	
Concrete Technology	022	2.5	26	25
Concrete—QV	021	2.4	24	
Concrete—QV (Exp)	731		32	
Const Cont Admin	366	2.5	25	25
Const Quality Mgt	029	1.5	15	15
Const Quality Mgt (Exp)	734		24	
Construction Safety	215		23	
Contracting Overview	742		21	
Cost Est Basics	181	3.1		
Cost Reimbursement	001	2.5		25
CQM For Contractors	784	1.3		
CQM -CD ROM	795		24	
CW Programming Process	358	3.1		
Design-Build Construction	425	3.1		
District Ofcr Intro Course	334	6.7		
Dredge Cost Estimating	118	2.8		28
Dredging Fundamentals	333	2.5		25
Dredging: Cont Admin	211	1.8		18
Dredging Fund (Exp)	754	1.5		
E&D Quality Management	208	1.7	19	17
Earthwork—QV	040	2.4		
Electrical Design I	373	3.3		33
Electrical Design II	374	3.3		33
Electrical Exterior Design	090	3.3		33
Electrical—QV	042	3.0	32	30
Electronic Secur Sys Des	360	3.2		32
Env Impact Assessment	169		28	
Env Reg Prac Application	398	2.2		22
Env Remed Technologies	395	2.8		2.8
Env Remed Tech-Subsurface	371	1.6		16
Env Remediation Overview	350	1.1		11
Env Sampling	225	2.5		25
Environ Laws & Regs	170		36	
ERGO Compliance	767	1.0		
Est For Const Mods	180	3.4	29	34
Fire Protection Engrg	006		34	
Flexible Pave Const—QV	050	2.9		29
Floating Plant Safety	778	1.5		
Flood Cont Chan Design	396	3.2		32
Fund of Wetlands Ecology	272	2.3		23
General Construction-QV	054	3.3	33	33
GIS Introduction	205	2.2		
GPS For GIS Applications	187	2.8		28
Historic Structures I	392	2.8	28	28

Title	Crs #	CEUs	LUs	PDHs
Historic Structures II	163	2.5	23	25
HVAC Ctrl Sys: Design	340	3.1		31
HVAC Ctrl Sys: O&M	246	3.1		
HVAC Design: Basic	391	3.3		33
HVAC Systems Comm	327	3.0		30
HVAC Systems T&B-QV	068	3.0		30
HW Manifest/Dot Cert	223	3.4		
Hydro Survey Techniques	056	3.3		33
Intro To Gen Const—QV	738		28	
Landscape—QV	755		8	
Masonry Const—QV	752		8	
Masonry Struc Design	317		25	
Master Planning	075	2.5	25	25
Mechanical—QV	074	3.2		32
MII Advanced	312	2.8	28	28
MII Basic	305		28	
National Electrical Code	078	3.0		30
Neg Const Cont Mods	368	2.5	25	25
O&M Contracts	119	2.6		26
O&M Contracts Adv	318	1.8		18
Paint Coatings (Sub)	083	2.6		
Paint, Coatings and QA	084	3.1	31	31
Planning for Ecosys Rest	348	3.1		
Proj Management - Mil Prog	088	3.1	33	31
Proj Management-Env Remed	260	2.2	22	
Project Management	355	2.3	22	23
Project Scheduling (NAS)	080	2.9		29
RAM-D	269	2.9		29
RE Acquisition 101	079	3.0		
RE Inleasing	102	3.0		
Real Property Management	286	2.9		
Regulatory III	325	2.9		29
Risk Analysis-WRP&M	349	3.1		
Risk Analysis-Flood	209	2.6		26
Roofing Technology	744		14	
Space Utilization	214		25	
Specs - Constr Contracts	185		31	
Streambank Eros/Prot	285	3.3		
Survey I: Basic Principles	295	3.0		30
Survey II: Construction	339	2.1		21
Survey III: Mapping	296	2.7		27
Survey IV : GPS	203	2.9		29
Value Engineering	110	3.2	24	32
Visitor Assist Mgt & Pol	324	1.8		
Visitor Assist NRM	147	3.2		
Water & the Watershed	164	2.7		
Welding—QV	116	2.9		29
Wetlands Eval Procedures	273	2.2		22

**COURSES SUPPORTING USACE COMMUNITIES OF PRACTICE**

Implementation of Communities of Practice (CoPs) throughout USACE will help ensure the maintenance of our technical expertise. CoP leaders and members will be able to use PROSPECT training as a conduit for individual and organizational learning. A list of CoPs, Sub-CoPs and applicable courses follows.

## PROSPECT COURSES AND USACE COMMUNITIES OF PRACTICE

CoP	Sub-CoP	Crs #	PROSPECT Course Title	
Planning		86	Civil Works Orientation	
		11	Coastal Project Planning	
		407	Consensus Building in Planning	
		270	Economic Analysis -- WRP	
		410	Economic Analysis in Planning	
		408	Environ Considerations in Planning	
		345	Flood Warn Prep Prog	
		409	Hydro & Hydra Considerations In Planning	
		57	Hydrologic Engineering for Planning	
		75	Master Planning	
		315	PCA/Finance Plan/Development	
		406	Plan Formulation	
		404	Planning Orientation	
		77	Planning Principles Procedures	
		405	Planning Process	
		349	Risk Analysis -- WRP&M	
		214	Space Utilization	
	PM/PgM		120	CE Commanders Course
			10	CW Program Development
		358	CW Programming Process	
		334	District Officer Introductory Course	
		355	Project Management	
		88	Project Management -- Mil Prog	
		762	Project Management Business Processes	
		383	Project Teambuilding	
Engineering & Construction		91	Public Involvement Communication	
	Architecture	3	Architectural Hardware--QV	
	Budgeting	118	Dredge Estimating	
	Civil Engineering	218	Civil Design Planning	
		185	Specs for Construction Contracts	
	Coastal Engineering	13	Coastal Eng Proj/Des	
	Computer Engineering	19	Computer Applications for Engrs & Mgrs	
	Construction Management	4	A-E Contracting	
		743	Basic Welding--QV	
		21	Concrete -- QV	
		332	Concrete Const Inspect Cert (ACI)	
		257	Concrete Maintenance & Repair	
		257	Concrete Maintenance & Repair	
		731	Concrete--QV	
		366	Const Contr Admin	
		29	Const Quality Mgt	
		734	Construction Quality Mgt (Exportable)	
		1	Cost Reimbursement	
		745	CQC--Bridge to Success	
		784	CQM for Contractors	
		795	CQM--CD Rom	
		425	Design Build Construction	
	208	E&D Quality Management		

		40	Earthwork--QV
		748	Elevator Safety--QV
		180	Est for Constr Mods
		50	Flexible Pavement Const--QV
		54	General Construction -- QV
		340	HVAC Control Systems: Design
		246	HVAC Control Systems: O&M
		382	HVAC Control Systems: QV
		391	HVAC Design: Basic
		327	HVAC Systems Commissioning
		68	HVAC Systems TA&B
		738	Intro to General Construction--QV
		755	Landscape--QV
		752	Masonry Construction--QV
		74	Mechanical -- QV
		368	Neg Constr Cont Mods
		400	Pavement Construction--QV
		115	Pavement Evaluation, Maint & Repair
		125	Pavement Maintenance Techniques
		80	Project Scheduling (NAS)
		744	Roofing Technology
		747	Structural Steel Fasteners
		94	UMCS LonWorks
	Cost Engineering	181	Cost Est Basics
		305	MII Basic
		312	MII Advanced
	Dam Safety	28	Dam Safety
	Electrical& Electronic Engrg	106	Diesel Generators
		373	Electrical Design I
		374	Electrical Design II
		90	Electrical Exterior Design
		42	Electrical--QV
		6	Fire Protection
		78	National Electrical Code
	Environmental Engineering	439	Const Wet Hab Miti
		275	Constructed Wetlands
		392	Historic Structures I
		163	Historic Structures II
		105	Historic Structures III
		165	Water & Watershed
	Geospatial	167	GIS Intermediate
		205	GIS Introduction
		187	GPS/GIS Applications
		56	Hydrographic Survey Techniques
		196	Remote Sensing Fundamentals
		295	Survey I
		339	Survey II
		296	Survey III
		203	Survey IV (GPS)
	Geotechnical Engineering	251	Appl of Eng Geology
		217	Fundamentals of Grouting
		279	Prob in Geotech Engr
		250	Seepage and Piping

	27	Seismic Design Buildings
	247	Seismic Stability
	282	Slope Stability
Hydrology & Hydraulics	394	Adv Streambank Protection
	369	Advance HEC-HMS
	67	Advance HEC-RAS
	178	Basic HEC-HMS
	114	Basic HEC-RAS
	396	Flood Cont Chan Design
	123	Flood Frequency Anal
	219	GIS-Flood Hydrologic Engr
	124	Groundwater Hydrology
	108	Groundwater Modeling
	320	H&H for Dam Safety
	316	HEC-FDA with Risk
	152	Hyd Data Mgt/HEC-DSS
	173	Interior Flood Hydrology
	155	Real Time Water Controls
	98	Reservoir Sys Anal
	209	Risk-Based Analysis
	161	Rivers and Wetlands
	122	Sediment Transport
	58	Stat Methods Hydro
	285	Streambank Eros/Prot
	188	Unsteady Flow Analysis
	177	Water Quality Management
Material Engineering	357	Adv Pavement Design
	23	Concrete Materials
	22	Concrete Technology
	9	Corrosion Control
	83	Paint Coatings (Sub)
	84	Paint, Coatings and QA
	85	Pavement Design & Const
	85	Pavement, Drainage Design & Construction
	749	Roller Compacted Concrete
	162	Welding Design
	116	Welding--QV
Mechanical Engineering	412	Lubrication of Mechanized Equipment
Phys & Electr Security Engrg	360	Electronic Security Sys (ESS) Design
Structural Engineering	317	Masonry Structural Design
	113	Soil Structure Interaction
Value Engineering	110	Value Engineering
Operations & Regulatory	333	Dredging Fundamentals
	754	Dredging Fundamentals
	211	Dredging: Contract Administration
	778	Floating Plant Safety
	793	Hazwoper 8-Hour Refresher - WBT
	72	Interpretive Services
	376	Management of Hydropower O&M
	119	O&M Contracts
	318	O&M Contracts Adv
	160	OMBIL for Managers

		245	Operations Management
		100	Regulatory I
		322	Regulatory IIA
		323	Regulatory IIB
		325	Regulatory III
		140	Regulatory IV
		137	Regulatory V
		436	Regulatory VII
		708	Safe Self
		766	Safety & Health HWS Exp/8-Hr
		324	Visitor Assist Mgt & Pol
		147	Visitor Assist NRM
		750	Visitor Surveys
		239	Wetland Mit Bnk Dev/Mgt
Environmental		772	Basic Spill Resp CW Facilities
		356	CERCLA/RCRA
		443	Clean Air Act
		263	Coastal Ecology
		299	Cultural Resources
		168	Ecological Resources
		103	Ecology for Engineers
		264	Ecosystem Planning & Management Issues
		280	Ecosystem Restoration
		398	Env Reg Practical Application
		337	Env Remed Tech - Contain
		371	Env Remed Tech - Subsurface
		350	Env Remediation Overview
		395	Env Remediation Techniques
		225	Env Sampling
		169	Environmental Impact Assessment
		170	Environmental Laws & Regulations
		198	Environmental Writing
		767	ERGO Compliance
		272	Fund Wetlands
		141	HTRW Construction Inspection
		223	HW Manifesting
		429	HW Manifesting Refresher
		440	Hydro Const Miti Wet
		820	Introduction to Wetlands
		399	Military Munitions Response Prog (MMRP)
		348	Planning for Ecosystem Restoration
		260	Proj Mgt -- Env Remediation
		444	Qualified Recycl (AEDA) Tng
		441	Radioactive Waste Transport
		430	Radioactive Waste Transport/DOT Recertification
		281	Riparian Zone Ecology/Restoration/Mgt
		424	Seagrass Mitigation
		273	Wetland Evaluation
		239	Wetland Mitigation Banking
		423	Wetland Plant Identification
		426	Wetland River Func/Ecol
		276	Wetlands Development & Restoration
Installation Support		253	1391 Preparation
		252	1391 Processor
		999	DPW Program Management
		988	DPW PWBOC
		989	DPW PWMOC

		972	DPW QA
		101	Economic Analysis MILCON
		991	JOC Advanced
		990	JOC Basic
		974	PBSC
		954	Purchasing Green
		978	QAE/PI
		286	Real Property Management
		150	Real Property Skills
	Information Technology	928	Adv SQL for IFS
		933	CMS
		981	DPW Budget/JCA
		983	DPW Work Estimating
		980	DPW Work Reception
		971	IFS Introduction
		984	IT for Managers
		975	SQL for IFS
Interagency & International Svcs			NONE
Real Estate		773	Homeowners Assistance Program (HAP) Exp
		79	RE Acquisition 101
		121	RE Acquisition 201
		102	RE Inleasing
		7	RE Mgt & Disposal 101
		73	RE Mgt & Disposal 201
		144	RE PMBP & Control
		724	Real Estate Training
Research & Development			
Counsel		342	CE Contract Law
		306	Conflict Mgt & Disp Res
		802	Ethics Awareness WBT
		179	Trial Attorney
Human Resources		64	Instructional Methods
		34	Leadership for Learning
Corporate Information		761	Computer Security
		758	Effective Use of Business Graphics
Resource Management	Accounting	800	Basic Financial Management -- WBT
		254	Budget Training
		12	Financial Management
	Budgeting	801	Financial Management for Managers -- WBT
		746	Operating Budget Appl Nonfin
Safety		172	Boat Opr License Examiner
		215	Construction Safety
		32	Crane Safety
		397	Diving Inspector
		259	Diving Refresher
		236	Field Safety
		81	Floating Plant Safety
		63	OSHA Inspection
		35	Working Diver

Logistics		798	Inventory Management WBT
Public Affairs			
Small and Disadvantaged Business			NONE
Security & Law Enforcement		269	RAM-D
		719	Physical Security
EEO		822	Prevention of Sexual Harassment WBT
EIG			NONE
Internal Review			NONE
Emergency Management			Civil Emergency Mgt for Execs
		112	Civil Emergency Mgt for Oper
		158	Flood Control & Coastal Emergencies

**PROPONENT SPONSORED  
ENGINEER CORPS TRAINING (PROSPECT)**

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**PROSPECT COURSES/WORKSHOPS  
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H&H for Dam Safety Studies (#320)

Historic Structures III (#105)

UMCS LonWorks (#94)

**PROSPECT COURSES  
DELETED FROM INVENTORY**

Account Management Workshop (#449)

Advanced Concepts in Pavement Design and Evaluation  
(#357)

Client Outreach Workshop (#442)

Computer Security (#761)

Conserving Biodiversity on Military Lands (#961)

Corps Path (#819)

Drilling and Sampling for Engineering Purposes (#216)

Effective Use of Business Graphics (#758)

Electronic Bid Solicitations (#437)

Environmental Laws & Regulations (8-Hour Refresher)  
VTC (#807)

Facilitator Workshop (#016)

HQ Maint/Lert Tng (#796)

Integrated Cultural Resources Management Plan (#962)

Integrated Natural Resources Management Plan (#963)

Introduction to Natural and Cultural Resources (#964)

Invasive Species on Military Lands (#965)

Marine Mammals Awareness (#966)

Natural Resources Compliance (#967)

Numerical Tools for Geotechnical Engineers (#294)

Performance in a Project Management Business Pro-  
cess (PMBP) Environment (#302)

Personnel Planning and Management for Mobilization  
(#717)

Planning for Project Execution Workshop (#224)

PMBP Facilitator Training (#823)

Project Management Professional Examination Review  
(#711)

Project Procurement and Contract Management (#705)

Project Scope Management (#701)

Project Team Development and Dynamics (#700)

Quality Management Performance Measurement (#710)

Quality Verification: Construction Safety (#739)

Real Estate Condemnation (#133)

Real Estate Relocation Assistance and Benefits (#193)

Records Management Professional Development (#393)

Risks Concepts and Management (#704)

Safety and Health for Hazardous Waste Sites (#351)

Security Engineering (#958)

Threatened and Endangered Species (TES) on Military  
Lands (#968)

Time and Cost Management (#703)

Total Environmental Restoration Contracts (TERC): The  
Planning, Award and Administration of Task Orders  
Workshop (#228)

Wetlands on Military Lands (#969)

**PROPONENT SPONSORED ENGINEER CORPS TRAINING  
(PROSPECT)**

**GENERAL**

The courses in this section are developed to meet unique Corps of Engineers and other government agency training needs. They are taught by Corps employees (parttime instructors) from HQUSACE, divisions, districts, and laboratories or are contracted to universities/private firms/consultants. PROSPECT courses provide formal learning opportunities in the support of - USACE Communities of Practice.

**CONTACT INFORMATION**

Commander  
USACE Professional Development Support Center  
ATTN: CEHR-P-RG (Registrar)  
PO Box 1600  
Huntsville, AL 35807-4301  
Telephone Number: 256-895-7425/7421  
Fax Number: 256-895-7469

**COST**

Tuition, travel, and per diem costs are all paid by your activity.

**STUDENT NOTIFICATION**

Student Reporting Instructions are electronically transmitted to the training coordinator approximately 60 days before the month in which the class session is to be held. This letter informs the student of hotel/classroom accommodations and any other pertinent course information.

 - Identifies Distance Learning Training Courses

**1391 PREPARATION**

**253**                      **Length: 36 Hours**                      **5413901A**  
**Tuition: \$1,200.00**

**Purpose.** This course provides a logical framework for preparing the DD Form 1391, "Military Construction Project Data," and provides working knowledge on how to verify requirements, prepare the documentation package, review, certify, and program a project to request congressional authorization and appropriation of military construction (MILCON) funds.

**Description.** Identification and verification of project requirements: (a) project requirement identification and definition; (b) required verification and justification; (c) alternative considerations; (d) criteria and standards; and (e) practical exercises (case study). Preparation of DD Form 1391 and related documentation: (1) detailed justification; (2) supplemental data preparation; and (3) project summary. Programming policies and procedures: (a) HQDA/HQUSACE military construction policies; (b) program development cycle for military construction; (c) appropriations and programs that provide for military construction; (d) program formulation and approval; (e) congressional interest; (f) Region/MACOM/ MSC/HQUSACE/USAISEC/HQ, IMA/HQDA review, certification and approval process; and (g) how to market a project. Overview of automated applications to support the military construction process.

**Prerequisites.** (a) Personnel at all levels, (installation, Region, MACOM, USACE district, USACE division, HQUSACE, HQ, IMA, HQDA, OSD), who are assigned to prepare, review, certify, approve, or use (e.g., design project managers) DD Forms 1391 (including personnel from other services, defense agencies and the private sector who are involved in DD Form 1391 Preparation); (b) Occupational series: 0800, 0020, and other personnel involved in DD Form 1391 process; (c) Grade: GS-05 and above. Nominees should have 6 months "on-the-job" training prior to attending this course. A hand-held calculator should be brought to the course.

<u>Session</u>	<u>Location</u>	<u>Date</u>
2005-1	Huntsville, AL	05/09/2005 05/13/2005
2005-2	Atlanta, GA	TBD

**1391 PROCESSOR**

**252**                      **Length: 36 Hours**                      **5413P01A**  
**Tuition: \$1,200.00**

**Purpose.** The DD Form 1391 Processor System, which is available in a web-enabled environment, is the means for documenting and submitting military construction project requirements and justification data for funding requests to Congress. Through lectures and practical exercise sessions, this course introduces the student to the capabilities, formats, functions, and usage procedures of the DD Form 1391 Processor System. The DD Form 1391 Processor System allows the user to pre-

pare, edit, query, submit, review, and distribute DD Forms and supporting DD Form 1391 documents electronically using a personal computer.

**Description.** Topics covered include creating, submitting, reviewing, and editing individual DD Forms 1391 as well as creating directories and custom reports. The custom reporting and directory features can assist an organization in managing its military construction program. All features of the system are covered.

**Prerequisites.** Nominees must be assigned current positions at Army installation, Region, MACOM, USACE district, USACE division, HQUSACE, HQ, IMA, or HQDA who are involved in preparing and/or reviewing the DD Form 1391 and related documentation associated with the military construction planning, programming, and budgeting process. (Note: Although this course is focused on Army policy, employees of other Services are welcome to attend for information purposes.)

<u>Session</u>	<u>Location</u>	<u>Date</u>
2005-1	Huntsville, AL	11/01/2004 11/05/2004
2005-2	Huntsville, AL	05/02/2005 05/06/2005

**A-E CONTRACTING**

**4**                                      **Length: 36 Hours**                      **41AEP01A**  
**CEUs: 3.1**                                      **PDHs: 31**                                      **LUs: 34**  
**Tuition: \$870.00**

**Purpose.** This course is for engineers, architects, technicians, project managers, contract specialists, and other personnel responsible for A-E contract procurement, and/or the supervision and administration of A-E contracts. The course provides a concentrated look at all aspects of A-E contracting, including acquisition planning, public announcement, selection, preproposal activities, negotiations, contract award, administration and closeout.

**Description.** Through lectures, individual study, and work group activities, this course provides detailed explanations of the laws and regulations affecting the A-E acquisition process, including selection, cost principles, preparation of Government cost estimates, cost or pricing data (truth-in-negotiations), negotiation strategies and techniques, contract award, and contract administration. Also covered are types of A-E contracts, contract clauses, proposal analysis, contractor liability, performance evaluations, and the A-E Contract Administration Support System (ACASS). The students are provided a course manual with essential background information, regulations, examples and exercises.

**Prerequisites.** Nominees must be assigned (a) Occupational Series: 0340, 0800, 0900, and 1100. (b) Grade: GS-11 or above. Lower grade employees are eligible only if their current duties are directly related to A-E contracting. (c) Employees with current or pending assignments which entail selection, negotiation of and/or administration of A-E contracts are eligible. (d) Nomi-

nees must not have attended similar courses within the past 3 years. (e) Attendees must bring a pocket calculator, and if possible, a laptop computer with EXCEL software and 3-1/2" disk drive.

Session	Location	Date
2005-1	Virginia Beach, VA	11/15/2004 11/19/2004
2005-2	Omaha, NE	12/06/2004 12/10/2004
2005-3	Huntsville, AL	01/10/2005 01/14/2005
2005-4	Mobile, AL	02/21/2005 02/25/2005
2005-5	Denver, CO	04/04/2005 04/08/2005
2005-6	Seattle, WA	05/23/2005 05/27/2005

### ADVANCED APPLICATIONS OF HEC-HMS

**369**                      **Length: 36 Hours**                      **35AHC01A**  
**Tuition: \$2,370.00**

**Purpose.** This course provides instructions on advanced applications of the Corps' Hydrologic Modeling System, HEC-HMS. Emphasis is placed on capabilities not covered in the Basic HEC-HMS class and capabilities not contained in the predecessor HEC-1 software. The new hydrologic simulation techniques covered are: continuous simulation and spatially distributed, gridded runoff calculations. The basis for these new techniques will be provided and reinforced with practical hands-on workshops.

**Description.** The course covers new hydrologic methods (continuous simulation and gridded runoff calculation) not included in the Basic HEC-HMS or previous HEC-1 courses. Students will learn basic concepts and theories in lectures and apply them to practical hydrologic engineering problems in workshops. The theoretical basis for soil moisture accounting and how it is represented in HEC-HMS will emphasize practical means for identifying and calibrating rapid, moderate, and slow responding components of various watershed moisture storages. Another new capability is the spatially distributed runoff computation via a gridded representation of the watershed. Creation of a gridded watershed from digital terrain models using HEC-GeoHMS will be described and used in workshops. A new gridded snow accumulation and melt capability will also be used. The ModClark unit graph method will be used to transmit gridded rainfall and snowmelt excess (from radar rainfall and GIS solid infiltration) to the basin outlet. Improved methods for representing hydraulic structures in a hydrologic model will also be presented.

**Prerequisites.** Nominees must have a basic understanding of hydrologic processes and how they are represented in HEC-HMS. Students should have taken the Basic HEC-HMS course (#178) or had equivalent experience. Basic HEC-HMS navigation skills will not be taught in this class. Nominees must be assigned (a) Occupational Series: Selected 0800 and 1300; (b) Grade: GS-09 or above.

Session	Location	Date
2005-1	Davis, CA	05/23/2005 05/27/2005

### ADVANCED STEADY FLOW WITH HEC-RAS

**67**                              **Length: 36 Hours**                              **35AH201A**  
**CEUs: 3.1**                              **PDHs: 31**

**Purpose.** This is an advanced course in applying computer program HEC-RAS. The course provides participants with the knowledge to effectively use computer program HEC-RAS to analyze difficult hydraulic conditions in natural and constructed channels.

**Description.** Topics include applications and limitations of one-dimensional models, effective use of HEC-RAS bridge and culvert analysis techniques, supercritical and mixed flow, use of the channel modification option to analyze proposed channel modifications, divided flow analysis, analysis of gated structures, modeling drop structures, and incorporating spatially referenced data into HEC-RAS via the GeoRAS ArcView extension.

**Prerequisites.** Nominees must be assigned (a) Occupational Series: Selected 0800 and 1300; (b) Grade: GS-9 or above. Students must be experienced engineers who have attended Flood Plain Hydrology or Steady Water Surface Profile Computation using HEC-RAS Basic (Crs. No. 114) courses. Participants must be in positions where they are currently engaged in using HEC-RAS in hydraulic investigations.

### ADVANCED STREAMBANK PROTECTION

**394**                              **Length: 36 Hours**                              **35ASP01A**  
**CEUs: 3.2**                              **PDHs: 32**                              **Tuition: \$3,650.00**

**Purpose.** Building on information presented in the Streambank Erosion and Protection course (#285), this course provides project managers, planners, technicians, engineers, biologists, designers, regulators, and personnel involved in permit review and Section 14, 1135, and 206 projects, with advanced training in the geomorphological aspects of river planform, the hydraulic and geotechnical processes related to specific streambank and bed erosion problems and their effect on the stream system, advanced training and design criteria for recently developed innovative protection techniques, and a short introduction to the benefits and importance of streamside riparian zone restoration.

**Description.** The majority of this class will be taught in the field. Classroom lectures will cover recently developed protection techniques, such as: Lunkers, Ajax, Newbury rocked riffles, and dormant willow post method. Led by a group of nationally recognized instructors, students will participate in a series of half- and full-day field trips to investigate a wide array of stream types (differing sizes, slopes, bed materials) within a 50 mile radius of Grenada, MS. Over 25 streamside, interactive mini-lectures will be presented in the field, with subjects to include: identifying dominant hydraulic, geotechnical, and morphological processes, analyzing trees and roots, transitions, bed gradation sampling techniques, vegetative roughness analysis, the role of Large Woody

Debris in bank protection (hydraulic, geotechnical, and environmental considerations), where is vegetation appropriate, and vegetative secession. The long-term performance (hydraulic, geotechnical, and environmental) and effectiveness of several grade control and streambank protection projects will be analyzed. Some projects are over 20 years old. Some failed sites will be reviewed. Repair or redesign and replacement of these projects will be discussed. Using advanced geomorphic analyses techniques, several severe bank erosion and bed degradation sites will be reviewed from both a local, and system-wide perspective. For these sites, project goals will be formulated and conceptual designs developed. In-class discussion will focus on further review of completed projects, failures, and erosion problems studied during the field trips. Students are encouraged to give a brief presentation of a current project for group discussion and review.

**LEARNING OBJECTIVES:** At the conclusion of this course the student will be able to develop a set of project goals, conduct a field analysis of a local or system-wide stream instability problems, consider and analyze several alternative bank and grade protection treatments, develop a site-specific comprehensive treatment plan taking into consideration the long-term effects of the stream on the project, long-term project performance, environmental ramifications, cost effectiveness, both local and overall effects of the project on the stream system, and develop a long-term monitoring, maintenance, and repair plan for the project.

**Prerequisites.** Within the last five years the student must have completed the Streambank Erosion and Protection course (#285). Federal nominees must be assigned (a) Occupational Series: Selected 0000-0100, 0400, 0800, 1300, and (b) Grade GS-07 or above.

**Notes. SPECIAL INSTRUCTIONS:** A majority of class time will be spent on a series of field trips covering approximately 3 full days of class time investigating streams within a large portion of the state of Mississippi. Students will be required to climb streambanks and wade approximately one mile of stream over a period of 2 to 3 hours. Field equipment will be provided by WES. Students should bring appropriate field clothes for 4 days in the field, extra socks, a windbreaker, and rain gear.

Session	Location	Date
2005-1	Grenada, MS	04/04/2005 04/08/2005

**APPLICATION OF ENGINEERING GEOLOGY**

**251 Length: 36 Hours 35AEG01A**

**Purpose.** This course presents a combined application of engineering geology, geophysics, and rock mechanics. The course is recommended for engineering geologists, design engineers, and construction engineers.

**Description.** Lectures, demonstrations, and reading assignments will cover: the history and evolution of

Engineering Geology; Site Investigations; Basic Rock Mechanics; Rock Excavation; Foundation Treatment; Rock Reinforcement; Underground Construction; Ground Water; and Hazardous/Toxic/Radioactive Waste.

**Prerequisites.** Nominees should be assigned: Occupational Series: Selected 0800, 0810, 1310, and 1350; Grade: GS-07 or above and project management personnel.

**ARCHITECTURAL HARDWARE-QV**

**3 Length: 36 Hours 35AHQ01A  
LU: 28 Tuition: \$1,560.00**

**Purpose.** This course develops new skills oriented to the quality verification of hardware used in building construction and updates the student's knowledge of current industry practices and changes in specifications. It also provides training that results in a more effective quality assurance.

**Description.** This course presents the fundamentals of the industry including hardware materials and finishes-their purpose, use, and application; basic information covering all architectural hardware products, terminology, and types of doors and frames; and the fundamentals of hardware schedules, preparation, and use. Emphasis is placed on how to interpret a hardware schedule for installation purposes and field use, as well as an analysis of a hardware schedule submitted to the designer for approval.

**Prerequisites.** Nominees must be assigned (a) Occupational Series: Selected 0800; (b) Grade: GS-05 or above; (c) current or projected assignment with responsibility for providing quality verification of hardware, specifying hardware, or reviewing hardware submittals from contractors for approval. Student must not have attended this or a similar course within the past 5 years.

**NOTE:** This course contains requirements which are mandatory for course completion and may require an estimated 3 hours of overtime. It is your responsibility to bring this to the attention of your supervisor so that an overtime request/determination can be made by your appropriate personnel. It is also your responsibility to certify the amount of time expended on these requirements to your supervisor when you request overtime compensation.

Session	Location	Date
2005-1	St. Louis, MO	06/20/2005 06/24/2005

 **BAS SPILL RESP CW FACILITIES**

**772 Length: 8 Hours  
Tuition: \$225.00**

**Purpose.** This course provides training for all personnel who may be in a position to respond to spills and/or leaks of hazardous substances. It is intended to provide

first responders at the awareness and operations levels with the skills and knowledge needed to protect their safety and health when confronted with a release of a hazardous substance. Requirement for this training is established in the Code of Federal Regulations (CFR); specifically 29 CFR 1910-120, paragraph q.

**Description.** The exportable training is visually-based, student-active, and self-contained. The course package consists of a Facilitator's Guide, Student Study Guide, and video content carrier. It presents the instructional materials in short increments via videocassette and the student study guide. Modules and submodules are short to enhance learning.

**Prerequisites.** Modules/Submodules. (1) First Responder Awareness Level: (a) Recognizing a Release and (b) Initiating a Response; (2) First Responder Operations Level: (a) Recognizing Hazards for a Release, (b) Protecting Self, and (c) Protecting Nearby Persons, Property, and Environment.

 **BASIC FINANCIAL MGT-WBT**

**800**                      **Length: 8 Hours**                      **Tuition: \$70.00**

**Purpose.** This course provides an overview of the various regulatory, policy, and statutes that govern the day-to-day financial management decisions.

**Description.** Modules of instruction include authorization and appropriations; statutory constraints on use of funds; funds management, and legislative initiatives in financial management and the CFO Act.

**Prerequisites.** Students should be general workers, supervisors, and management personnel who are directly involved with the day-to-day financial management responsibilities.

<u>Session</u>	<u>Location</u>	<u>Date</u>
2005-1	Web-based	10/01/2004 09/30/2005

 **BASIC WELDING—QV**

**743**                      **Length: 24 Hours**                      **35WLQ01A**  
**Tuition: \$225.00**

**Purpose.** This training provides participants with the basic knowledge to interpret the various methods and techniques employed in weldments and to assure the quality of welds.

**Description.** The training materials include one ½" videotape cassette, a Facilitator's Guide (FG), and a Student Study Guide (SSG). The SSG includes the videotape narration, task-active exercises and answers (pretest and posttest), sample forms, and a glossary.

Modules. The seven modules of instruction presented in the course are (a) Welding Quality Assurance Requirements and Duties; (b) Welding Specifications and

Codes; (c) Basic Welding; (d) Symbols, Welding, and Nondestructive (NDT) Testing; (e) Welding Procedure Specifications, Qualifications, and Welding Performance Qualifications; (f) Weld Testing and Defects; and (g) Welding Safety.

**Prerequisites.** Nominees should be assigned (a) Occupational Series: 0802, 0809, and selected 0800; (b) Grade: GS-05 through GS-11. Students should have current or projected assignments having welding quality assurance responsibilities. Nominees should have completed the Construction Quality Management (classroom or exportable) course.

**BLASTING SAFETY**

**310**                      **Length: 32 Hours**                      **58BLS01A**  
**Tuition: \$1,950.00**

**Purpose.** This course is designed for USACE construction personnel to include Engineers, Quality Assurance Representatives, Safety and Occupational Health professionals, Program Managers and other individuals involved with explosive blasting operations. This course provides a concentrated overview of all aspects of transporting, storing and using high explosives for typical construction operations and includes a detailed study of blasting requirements found in EM 385-1-1, Title 29 CFR 1910 and 1926, and other consensus standards regulating explosives and blasting operations.

**Description.** Through lectures, individual studies, and work-group activities, this course provides a detailed review of the theory and use of commercial explosives as it relates to Surface Blasting, Underground Blasting, Controlling Blast Vibration and Airblast, as well as associated safety requirements. Specific topics covered in this class include the following topics: types of explosives, energy release approximations, explosives properties, types of explosives, priming and boosting, initiation systems, rock breakage mechanism, blast-hole timing, surface blast design, production blast, sinking cuts, trenching, pre-splitting, blast vibrations and airblast, geologic effects on blasting and blasting safety in storage and transportation. The control of blast vibration and airblast training segment will cover vibration and seismic, waves, seismic waves, vibration instrumentation, vibration records and interpretations, factors affecting vibration, vibration control, ground calibration vibration standards, long term vibration and fatigue, vibration effects, blasting standard for non-residential structures, blasting near concrete structures, air blast monitoring and control, glass breakage, regions of potential damage for air blast, procedures to avoid air blast focusing, pre-blast surveys, and effects of blasting on water wells and aquifers.

**Prerequisites.** Nominees must be assigned to Occupational Series: 0340; 0800; 0018; 0803; 0690; and pertinent WG series at all grade levels.

<u>Session</u>	<u>Location</u>	<u>Date</u>
2005-1	Dallas/Ft. Worth, TX	05/16/2005 05/20/2005

**BOAT OPERATOR LICENSE EXAMINER**

**172**                      **Length: 64 Hours**                      **33BOL01A**  
**Tuition: \$3,830.00**

**Purpose.** This course trains, tests, and licenses individuals as motor boat operators and license examiners for the Corps of Engineers.

**Description.** Lectures, demonstrations, reading assignments, and practical exercises cover the areas listed below and enable students to perform duties as outlined in Engineer Regulation 385-1-91. Specific areas to be covered include (a) USACE Boat Licensing Policy; (b) required safety and normal equipment, and equipment maintenance; (c) boat orientation: (1) starting procedures, (2) checking equipment, (3) getting underway, and (4) refueling procedures; (d) trailers and trailer maintenance; (e) Marlinspike Seamanship; (f) navigation and rules of the road; (g) fire suppression; (h) course familiarization; (i) emergency procedures: (1) reaching, throwing, (2) self rescue, H.E.L.P., and huddle, (3) overboard drill, roll aboard; (j) boat operation; (k) secure operation; (l) repetitive boat exercises: (1) serpentine course, (2) transition serpentine, (3) avoidance course, (4) docking; (m) Concurrent Boat Exercise (Practical): (1) trailering, (2) launching and retrieving boats, (3) alongside maneuvering and boarding, (4) towing boats, (5) emergency procedures; (n) Boating Skills (Practical) and; (o) Safety Manual (EM 385-1-1) Review.

**Prerequisites.** Students should have been designated motor boat training duties at their facility. Individuals attending this course must be (a) able to swim in a Personal Flotation Device (PFD) for 100 yards; (b) an experienced motor boat operator; and (c) designated to train local motor boat operators in boating skills.

<u>Session</u>	<u>Location</u>	<u>Date</u>
2005-1	Glynco, GA	08/16/2005 08/25/2005

**BUDGET TRAINING**

**254**                      **Length: 36 Hours**                      **42BTC01A**  
**CEUs: 3.3**                      **Tuition: \$1,230.00**

**Purpose.** This course is targeted for those civilian and military employees of the Corps of Engineers who work directly within the financial management arena. It provides a framework and knowledge of the federal budget process with specialized emphasis on policies and procedures of the Corps of Engineers. The objective is to provide a uniform understanding of Corps budgeting so that operations are improved/streamlined at all Corps organizational levels.

**Description.** The course describes program and budget activities at the HQUSACE, MSC, District, FOA, and Laboratory levels, and how these activities interrelate

with those at Army, DOD, OMB, and the Congress. The curriculum is structured around the formulation and execution of an activity's operating budget. The material is presented through lectures and practical exercises covering various budgeting processes and budget-related issues. Major topics/areas include (a) operating budgets; (b) military and civil works programs; (c) military and civil works budgeting; (d) budget execution; (e) statutory and administrative limitations; and (f) special subjects, such as mobilization and CEFMS applications.

**Prerequisites.** Restricted to full time Corps members in the Grade of GS-11 (0-3) and higher who have significant financial management responsibilities in their commands. Any waiver to these prerequisites must be approved by the student's local Chief of Resource Management prior to requesting a space allocation.

<u>Session</u>	<u>Location</u>	<u>Date</u>
2005-1	Savannah, GA	04/11/2005 04/15/2005
2005-2	St. Louis, MO	05/16/2005 05/20/2005
2005-3	Nashville, TN	06/20/2005 06/24/2005
2005-4	Seattle, WA	07/18/2005 07/22/2005

**CE COMMANDERS COURSE**

**120**                      **Length: 140 Hours**                      **15CCC01A**  
**Tuition: \$4,480.00**

**Purpose.** The USACE Command Preparation Program orients newly assigned district commanders and deputy division/district commanders to some of the unique aspects of command in USACE organizations. The program also provides an understanding and awareness of a broad range of topics related to executing the USACE mission and serving its customers. Consisting of two subcourses, PCC and the Commanders' Course, the USACE Command Preparation Program is intended to establish both the doctrinal framework for district operations, as well as specific tactics, techniques, and procedures for success.

**Description.** District Engineer Pre-Command Course (PCC), "District Command - Essential Facts and Knowledge," is 4 1/2 days long. It provides the district commander designees with the tools, knowledge, and fundamentals to assume command of their district. They will learn key concepts of the Project Management Business Process, Resource Management, and Human Resources issues. In addition to hearing the Chief's command philosophy, they will meet with the Directors of Civil Works and Military Programs. The HQ staff will be introduced, as well. The course starts the first Monday after the last Senior Service College graduation and is mandatory for all District Engineer designees assuming command later in the year.

USACE Commanders' Course, "District Command - Tactics, Techniques, and Procedures" is 8 days long. It is mandatory for all recently assigned District Engineers and recommended for all division and district deputy commanders. It builds upon the introductions in PCC,

allowing the students to fully explore the details of command of USACE organizations. Led by serving District Engineers and subject matter experts, the students use lecture and case studies to gain deeper understanding of USACE processes and doctrine. The course concludes with an orientation and tour demonstrating the capabilities of the Topographic Engineering Center. This Phase takes place in October, immediately before the Fall District Commanders' Conference.

**Prerequisites.** Designated and recently assigned district commanders and deputy district/division commanders. Commanders are nominated by the Military Personnel Division of HQUSACE (CEHR-M). Deputy commanders are nominated by their district/division. Nominations for deputy commanders for Phase II should be sent to the Chief, USACE Professional Development Support Center, ATTN: CEHR-P-TO, P.O. Box 1600, Huntsville, Alabama 35807-4301.

Session	Location	Date
2005-1	Vicksburg, MS	10/19/2004 10/29/2005
2005-1	Washington, DC	06/20/2005 06/24/2005

**CE CONTRACT LAW**

**342**                      **Length: 36 Hours**                      **37ECL01A**  
**CEUs: 2.8**                      **PDHs: 28**

**Purpose.** This course is primarily intended to instruct USACE attorneys in the basic legal principles and procedures related to Corps of Engineers construction contracting. Attendees will be able to provide competent legal advice on contractual matters and to process contract actions such as bid protests, mistakes-in-bid, and claims and appeals.

**Description.** Through the use of lectures, workshops, and case study sessions, this course primarily addresses those aspects of construction contract law essential to successfully accomplishing the Corps' contract mission. This course is designed for training Corps of Engineers attorneys, acquisition personnel, and project managers.

**Prerequisites.** Nominees must be assigned (a) Occupational series: 905, 1102, or 340; (b) Grade: GS-09 or above; (c) Other: This course is recommended for attendees that have had basic government procurement law training.

**CERCLA/RCRA PROCESS**

**356**                      **Length: 28 Hours**                      **33HEL01A**  
**CEUs: 2.1**                      **PDHs: 21**                      **Tuition: \$1,060.00**

**Purpose.** This course trains personnel on the Comprehensive, Environmental Response, Compensation and Liability Act (CERCLA) hazardous substance response process and the Resource Conservation and Recovery Act (RCRA) corrective action process as it relates to the Department of Defense. It addresses the Defense Environmental Restoration Program which includes the

Installation Restoration Program (IRP), the Base Realignment and Closure (BRAC) Program, and the Formerly Used Defense Sites (FUDS) Program. It also has applicability to cleanups conducted under the Formerly Used Sites Remedial Action Program (FUSRAP), the EPA Superfund program, and cleanups at Army Corps of Engineers Civil Works facilities. THIS IS AN ISEERB APPROVED COURSE.

**Description.** This course has been developed by in-house USACE staff and focuses on the regulatory requirements for cleaning up hazardous substances, pollutants, and contaminants under CERCLA and solid and/or hazardous wastes at RCRA sites. This course covers the CERCLA process as outlined by Subpart E of the National Contingency Plan and the RCRA corrective action process as implemented via EPA guidance, RCRA permit requirements, and consent orders. CERCLA topics addressed include preliminary assessments, site inspections, removal site evaluations, engineering evaluations/cost analyses, removal actions, remedial investigations, feasibility studies, proposed plans, records of decision (ROD), pre and post-ROD changes, remedial design and construction, and public participation requirements. RCRA topics include the initiation of the RCRA corrective action process via permit conditions and consent orders, the RCRA Facility Assessment, RCRA Facility Investigations, Interim Stabilization Measures, Corrective Measures Studies, and Corrective Measures Implementation. In addition to the RCRA course, individual two-day workshops on the CERCLA or RCRA process can be tailored to meet your site specific training needs. Whether you are interested in an onsite CERCLA/RCRA process course or a separate course featuring either the CERCLA or the RCRA process, contact the USACE Professional Development Support Center, Huntsville, AL.

**Prerequisites.** Nominees must have at least one year of environmental experience. Priority will be given to personnel directly involved in environmental restoration. The target audience for this course includes the following occupational series: 800 series Engineers (0801, 0819, 0830, 0893, 0896, etc); Environmental Protection Specialist (0028); Program Managers, Engineering and Science (0340); Industrial Hygienists (0690); Geologists/Hydrologist (1350, 1315); and Chemists (1320).

Session	Location	Date
2005-1	San Francisco, CA	06/07/2005 06/10/2005

**CIVIL DESIGN FOR PLANNING**

**218**                      **Length: 36 Hours**                      **35CDP01A**  
**Tuition: \$1,600.00**

**Purpose.** This course focuses on the Corps of Engineers (CE) Civil Works project development process. It provides a general understanding of the broad-range of engineering studies and sensitive engineering issues that impact and influence project formulation, the reconnaissance and feasibility planning phase, as well as

the preconstruction engineering and design (PED) phase. The course also covers the processes involved in accomplishing studies (e.g. independent technical review, policy review, quality control, value engineering), and tools (World Wide Web, mapping, risk based analysis, Project Management Plans, etc.). It discusses the role of the designer and planner in the context of the Project Delivery Team. It is intended to reach newly assigned professional scientists/engineers within the engineering and planning functions of the Corps or those who are new to the Civil Works process. Individuals not working with, or planning to work with, the CE Civil Works process may receive less benefit from this class.

**Description.** The objective of this course is to develop knowledge, skills, and aptitudes regarding the policies, procedures, tools, and techniques for the planning and design of a Corps of Engineers Civil Works engineering project. After completing this course, the student should be able to more effectively execute and coordinate a complex, multi-disciplinary CE Civil Works project. Topics include organization and development of resources required to execute the process, policy guidance, and various sensitive design concerns within the planning process, engineering overview, geotechnical, electrical/mechanical, hydrology and hydraulics, and structural engineering studies as well as geographical information systems. Emphasis is placed on the Independent Technical Review process, and successful navigation through the policy review process. This course tracks the Corps of Engineers Project Management Business Process from the authorization of the first study to the completion of construction. The course was developed for CE Civil Works personnel and may be of reduced value to personnel from other agencies.

**Prerequisites.** Nominees should be on, or have a potential assignment to a Civil Works study team in the Planning or Engineering phases and have functional responsibilities within the Planning or Engineering divisions; (a) Occupational Series: All series; and (b) Grade: GS-07 through GS-13. Individuals not working with, or planning to work with, the Corps of Engineers Civil Works process may receive less benefit from this class.

<u>Session</u>	<u>Location</u>	<u>Date</u>
2005-1	New Orleans, LA	06/20/2005 06/24/2005

**CIVIL WORKS ORIENTATION**

**86**                      **Length: 36 Hours**                      **35PWR01A**  
**Tuition: \$1,620.00**

**Purpose.** This course provides the student with a basic understanding of the Corps of Engineers civil works program and the project development process. It is designed for Corps employees who are relatively new to civil works or individuals who require an overall understanding of and the procedural stages involved in the development of civil works projects.

**Description.** Topics will be presented and discussed relating to the Civil Works process, including: overviews of the Corps missions, programs and organizational structure; legislative and review processes; study and project cost-sharing; program budgeting and funding; environmental compliance and HTRW considerations; public involvement; partnering and cooperation with non-Federal sponsors; and new trends and developments. The student will learn the entire Civil Works process from the problem identification to project implementation. Various individual, group, and class exercises; role-plays of Corps-sponsor meetings; and discussions are used throughout the course to help students understand the process.

**Prerequisites.** Nominees must be involved in or closely support civil works planning, project management, or programs management and must be assigned (a) Occupational Series: Selected 0020, 0100, 0300, 0400, 0800, 0900, 1100, and 1300 series or others such as public affairs officers, real estate, or counsel that support the development process; (b) Grade: GS-05 or above.

<u>Session</u>	<u>Location</u>	<u>Date</u>
2005-1	Huntsville, AL	03/01/2005 03/04/2005
2005-2	St. Louis, MO	04/05/2005 04/08/2005
2005-3	Arlington, VA	05/17/2005 05/20/2005
2005-4	New Orleans, LA	06/14/2005 06/17/2005

**CIVIL WORKS PROGRAMMING PROCESS**

**358**                      **Length: 36 Hours**                      **46CWB01A**  
**CEUs: 3.1**                      **Tuition: \$1,510.00**

**Purpose.** This course is designed primarily for programmers, project managers, study managers and functional mission personnel. It provides a comprehensive understanding of civil works activities, programming and project/study management concepts and their interrelationship with mission accomplishment.

**Description.** The course includes practical exercises and discussions of: (1) the Corps of Engineers, the Administration, the Congress, and actions relative to civil works studies and projects, authorizations, and appropriations; (2) program development and formulation at the district and the division level, including new starts, continuing programs and capabilities; (3) detailed preparation of study/project cost estimates, schedules, justification documents, and related project management documents; (4) program defense including the question and answer process, district briefings, division testimony, and OMB and congressional hearings; (5) study/project and program execution, including work allowances, reprogramming actions, and related documents.

**Prerequisites.** Nominees must be assigned (a) Occupational Series: Any job series within career program 18 (engineers and scientists) and career program 11 (comptroller); (b) Grade: GS-07 and above - below GS-07 individuals are eligible if recommended by their

supervisors; (c) categories of eligibility: 1. Personnel assigned to programs and project management, and planning organizations. 2. Personnel assigned to engineering or construction-operations functional elements who are involved in the civil works funding process and/or the preparation of program information. 3. Other personnel assigned to positions in support of programs and project management who require a greater understanding of the civil works programming process and the preparation of related documents.

Session	Location	Date
2005-1	Denver, CO	07/11/2005 07/15/2005
2005-2	Jacksonville, FL	08/15/2005 08/19/2005

**CLEAN AIR ACT**

**443**                      **Length: 20 Hours**                      **33CAW01A**  
**Tuition: \$810.00**

**Purpose.** This workshop has been designed to introduce the student to the major programs of the Clean Air Act (CAA) and associated environmental compliance requirements. In addition to learning basic CAA regulatory requirements, students will also be taught to identify when a CAA construction or operating permit may be required.

**Description.** During the course of this workshop, students will gain a better understanding of the regulatory requirements pertaining to the major programs of the CAA including National Ambient Air Quality Standards, conformity of federal actions, New Source Review and Prevention of Significant Deterioration, hazardous air pollutant regulations including NESHAP and MACT standards, operating permits, air emission inventories, the use of emission factors, and the regulation of ozone depleting substances. Application of the standards to typical DoD projects will be addressed, including construction operations and remedial actions. Practical exercises will be performed throughout the workshop to provide the student with hands-on experience.

**Prerequisites.** Nominees must be assigned (a) Occupational Series: Selected 0020, 0100, 0400, 0690, 0800, 0900, and 1300 or by demonstration of special needs related to job responsibilities; (b) Grade: GS-07 or above.

Session	Location	Date
2005-1	Seattle, WA	07/12/2005 07/14/2005

**CMS TRAINING**

**933**                      **Length: 26 Hours**  
**Onsite Only**

**Purpose.** The primary focus of the Contract Management System (CMS) is to help Army Directorate of Public Works personnel organize and manage their project acquisition process. CMS may be used to support the development of studies, plans, design,

maintenance, construction or any other type of work targeted for accomplishment by contract.

**Description.** The primary focus of the Contract Management System (CMS) is to help Army Directorate of Public Works personnel organize and manage their project acquisition process. CMS may be used to support the development of studies, plans, design, maintenance, construction or any other type of work targeted for accomplishment by contract.

**Prerequisites.** The primary focus of the Contract Management System (CMS) is to help Army Directorate of Public Works personnel organize and manage their project acquisition process. CMS may be used to support the development of studies, plans, design, maintenance, construction or any other type of work targeted for accomplishment by contract.

**COASTAL ECOLOGY**

**263**                      **Length: 36 Hours**                      **33COE01A**  
**CEUs: 2.6**                      **Tuition: \$3,080.00**

**Purpose.** This course provides Corps of Engineer personnel with state-of-the-art knowledge and technology in marine and coastal ecology. Students are given an overview of the latest scientific and analytical techniques in the field of coast ecology and related sciences.

**Description.** Through a series of lectures, practical exercises, and field trips, students are introduced to the basic concepts of marine/estuarine ecology (including benthic ecosystems, fisheries, coastal marsh and seagrass ecology), sensitive resources, experimental design, and current marine ecological techniques such as the Benthic Resources Assessment Techniques (BRAT) and the Sediment Profiling (SP) camera. The role and importance of coastal ecosystems will be discussed. Temperate, subtropical, and tropical ecosystems will be covered for the Gulf, Atlantic, and Pacific coasts.

**Prerequisites.** Nominees must be assigned: (a) Occupational series: 0020, 0400s, 0800s, and 1300s; (b) Grade: GS-09 and above; and (c) This course is meant primarily for engineers, scientists, and technicians with planning, operations, or regulatory duty assignments involving marine and coastal systems.

**SPECIAL INSTRUCTIONS:** This course involves extensive "hands-on" field exercises. Therefore, students should be prepared to work in a wet and muddy environment.

Session	Location	Date
2005-1	Monterey, CA	05/23/2005 05/27/2005

**COASTAL ENGINEERING**

**13**                      **Length: 60 Hours**                      **35CE201A**  
**CEUs: 2.7**                      **PDHs: 27**

**Purpose.** This course provides formal and hands-on training in the fundamental processes, and functional and structural design elements required to work on coastal engineering projects. The emphasis is on learning and applying the basics of shore protection and navigation structure planning, design, rehabilitation, and maintenance. Attendees are introduced to coastal project and element alternatives, functions, and design procedures for structural and non-structural solutions. This course is intended primarily for planning, engineering, and construction or operations personnel needing state-of-the-art procedures and techniques for working with coastal projects. Course content will emphasize up-to-date technology and analysis tools specific to the needs of both newly assigned and experienced practicing coastal engineers.

**Description.** Basic scientific principles and computational procedures presented in the "Shore Protection Manual" (SPM) and in completed portions of the "Coastal Engineering Manual" (CEM) will serve as the formal instructional foundation. Attendees will become familiar with the use of these same references plus the Automated Coastal Engineering Systems (ACES) and other numerical computational tools and models, physical models, and field data collection through lecture, case studies, and classroom exercises. Access to and use of USACE and other coastal processes and map data bases will be explored. These materials will be illustrated by the instructors' examples and through the hands-on use of calculator and PC scale computational technology. Attendees will be assigned to work on a team coastal engineering problem for presentation to the rest of the class. Attendees will become familiar with (1) coastal project development and structure design including navigation breakwaters and jetties, shore-connected and detached breakwaters, groins, seawalls, and revetments, and (2) the planning and design of beachfills, offshore berms, physical aspects of coastal wetland restoration, and dredging and material disposal management, and channel design. Attendees will learn the functional and structural design characteristics of different types of coastal structures and how to evaluate non-structural alternatives. Topics discussed are (a) wave structure interaction (i.e., wave run-up, overtopping, reflection and transmission); (b) selection of design parameters; (c) design and use of coastal armoring; (d) design and use of erosion control techniques; (e) design and use of navigation and harbor structures; (f) beach fill design and other sediment management projects; and (g) microcomputer computational tools.

**Prerequisites.** Engineers or scientists who have been assigned to coastal projects and who need in-depth knowledge on coastal planning, project design, and operational practices. Attendees should have some

experience or background in coastal processes having taken either the PROSPECT Coastal Planning course (#11) or an equivalent university level coastal course. Grade: GS-09 or above.

**COASTAL PROJECT PLANNING**

**11**                      **Length: 36 Hours**                      **35CEN01A**  
**CEUs: 2.8**                      **PDHs: 28**                      **Tuition: \$2,430.00**

**Purpose.** This course provides a formal introduction to coastal project related technological and management issues including hydrodynamic and sediment transport processes, geological framework and evolution, and problems and solutions especially as they relate to the Corps of Engineers coastal planning and environmental management mission. It broadens the technological base of planners, engineers, managers, environmentalists, geologists, regulatory, and others involved in studies and projects of the coastal zone.

**Description.** Major topics to be covered include: hydrodynamics, littoral sediment transport processes, geomorphology of lakeshores and sea coasts, sediment budgets, coastal problem identification and analysis of alternative solutions, impact prediction and monitoring, coastal data collection, and the basic issues of coastal project planning and design. Unique coastal settings, regional management, stewardship and mitigative practices will be emphasized. The mission and authorities of the Corps of Engineers, particularly as they relate to other Federal agencies and state coastal zone management, will be explored.

Attendees will become familiar with the "Shore Protection Manual" (SPM) and with completed portion of the "Coastal Engineering Manual" (CEM) as basic reference material and will also be introduced to the Automated Coastal Engineering Systems (ACES) and other computational resources. Issues and principles will be illustrated through the instructors' examples, case studies, and a field trip to select sites on the North Carolina Outer Banks. The training site is the USACE Coastal Field Research Facilities and select elements of the course are designed to take advantage of this venue.

**Prerequisites.** Nominees should be assigned as engineers, geologists, physical scientists, environmentalists, biologists, or planners who have review, planning, or design responsibilities for coastal shore protection, navigation, and environmental projects. Grade: GS-09 or above.

**SPECIAL INSTRUCTIONS.** This course will include a field trip and attendees should be prepared for walking across irregular terrain regardless of weather.

<u>Session</u>	<u>Location</u>	<u>Date</u>
2005-1	Duck, NC	04/25/2005 04/29/2005

**COMPUTER APPLICATIONS FOR ENGRS & MGRS**

**19**                      **Length: 36 Hours**                      **54CAE01A**  
**Tuition: \$2,540.00**

**Purpose.** This course informs and instructs engineers and engineering managers in the use of computer-aided engineering design techniques and applications available within the Corps of Engineers. A strong emphasis is placed on "hands-on" computer-aided engineering design training by the use of workshops and software demonstrations.

**Description.** This course will provide a basic overview to microcomputer usage and teach the use of computer-aided engineering design applications available in the Computer-Aided Structural Engineering (CASE) Library as well as other resources available to the Corps of Engineers.

The course will contain specific workshops and lectures on computer-aided engineering design applications. Some of the topics introduced in the workshops include: (a) DOS, Windows 95 and Windows NT; (b) Internet and World Wide Web; (c) structural engineering applications; (d) geotechnical engineering applications; (e) soil/structure interaction applications; (f) hydraulic engineering application; (g) finite element modeling; and (h) computer-aided design and drafting (Autocad, Microstation, etc.).

The applications presented in the workshops and lectures are primarily available in the CASE Library. For a further description of these applications, a CASE catalog is maintained by the ECPL - Waterways Experiment Station - Information Technology Laboratory - CEWES-ID-E.

**Prerequisites.** Nominees must be assigned (a) Occupational Series: 0800; (b) Grade: GS-07 or above; (c) Other: nominee should be a design engineer interested in using computers or an engineer manager who supervises engineers using computer-aided engineering design. Familiarity with using microcomputers, though not required, is very helpful.

<u>Session</u>	<u>Location</u>	<u>Date</u>
2005-1	Vicksburg, MS	11/15/2004 11/19/2004

**CONCRETE CONST INSPECTOR CERTIFICATION**

**332**                      **Length: 36 Hours**                      **35QV201A**  
**LUs: 30**                      **Tuition: \$3,160.00**

**Purpose.** This course provides the participant with the specific knowledge required to become certified by the American Concrete Institute (ACI) as a Concrete Construction Inspector. The Corps of Engineers EM 1110-2-2000 as well as several Guide Specifications requires

that those individuals responsible for inspection of concrete construction be certified.

**Description.** This course is designed to upgrade the quality of concrete construction throughout the Corps of Engineers by providing training and certification to those individuals directly responsible for verifying concrete quality. Topics include role of the inspector, contract documents, concrete materials, pre-placement inspection, placement inspection, post-placement inspection, plans reading, formwork installation and removal, reinforcement, embedments, sampling and testing freshly mixed concrete, conveying, placement, consolidation, finishing, jointing, curing and protection.

**ACI CERTIFICATION EXAMINATION.** The participants will be required to pass a rigorous three-hour multiple-choice examination of approximately 80 questions and a one-hour engineering plans examination of approximately 20 questions. The one-hour plans reading examination is designed to test the examinee's ability to read and understand engineering drawings. A score of 70 percent or higher constitutes a passing grade on each of the examinations. The three-hour written examination is open-book, but the technical materials allowed into the examination room are restricted to those listed as resource materials approved by ACI.

**SPECIAL REQUIREMENTS.** ACI will grant certification only to those applicants who: 1) Hold current certification as an ACI Concrete Field Testing Technician - Grade I; 2) Obtain a passing grade on the written inspection examination; 3) Obtain a passing grade on the written plans reading examination; 4) Possess at least one of the following qualifications: (1) A minimum of two years (60 credit hours) of college or technical school plus two years of work experience in concrete inspection and/or field testing of concrete. A copy of your diploma or transcript is required; (2) High school graduate equivalent plus a minimum of three years of work experience in concrete inspection and/or field testing of concrete. A copy of your diploma or equivalent is required; and (3) Five years of work experience in concrete inspection and/or field testing of concrete. Your work experience as required above must include: (1) Decision-making responsibility and authority; (2) Verification of compliance with plans, specifications, and codes; (3) Evaluation of concrete construction in the field; (4) Documentation and reporting of inspection results; and (5) Proficiency in appropriate areas of concrete construction inspection. Verification of the amount and range of work experience by the applicants employer(s) is required. The examination provided in this course is only part of the requirements for ACI inspector certification. The qualification of each individual is determined by the ACI Certification Department.

**Prerequisites.** Nominees must have taken the PROSPECT classroom course "Concrete: Quality Verification" or the PROSPECT distance learning course "Concrete QV". No exceptions. In addition to this, nominees must be currently certified as an ACI Concrete

Field Technician-Grade I. This certification can be obtained through successful completion of training courses conducted throughout the country by ACI Local Sponsoring Groups. Nominees should be assigned (a) Occupational Series: 0802, 0809, and 0810; (b) Grade: GS-07 and above.

<u>Session</u>	<u>Location</u>	<u>Date</u>
2005-1	Vicksburg, MS	03/21/2005 03/25/2005

**CONCRETE ENGINEERING TECHNOLOGY**

<b>22</b>	<b>Length: 36 Hours</b>	<b>35CET01A</b>
<b>CEUs: 2.5</b>	<b>PDHs: 25</b>	<b>LUs: 26</b>
	<b>Tuition: \$2,750.00</b>	

**Purpose.** This course relates to the participant's responsibilities in design, construction, and evaluation of structures and preparation of specifications dealing with concrete and related products.

**Description.** Through lecture and conference sessions, this course covers design considerations (material investigations, thermal properties, specialized techniques, grouting, shotcrete, roller-compacted concrete, and high strength specialized applications); preparation of concrete materials design memorandum; construction (qualities of concrete, approval of materials, quality control, quality assurance, and acceptance); evaluation and maintenance of existing structure condition survey, nondestructive testing, instrumentation, cavitation resistance, fibrous concrete, and new materials. Time is allotted for consultation with instructors. Students should come to the course prepared to present an actual concrete materials problem they have encountered and which they believe may be of interest to their fellow students. Slide and overhead projectors, VCR and large screen TV, and other audio/visual aids are available in the classroom for students to use as needed in making their presentations.

**Prerequisites.** Nominees must be assigned (a) Occupational Series: Selected 0802, 0809, and 0810; (b) Grade: GS-09 or above; (c) Other: Students should have a current or projected assignment as design or construction engineers or senior technicians related to concrete materials.

<u>Session</u>	<u>Location</u>	<u>Date</u>
2005-1	Vicksburg, MS	04/18/2005 04/22/2005

**CONCRETE MAINTENANCE & REPAIR**

<b>257</b>	<b>Length: 36 Hours</b>	<b>35CMR01A</b>
	<b>Tuition: \$1,760.00</b>	

**Purpose.** This course provides the participant with specific knowledge of materials, techniques, and procedures for repair of cracked and deteriorated concrete and for maintenance of sound concrete.

**Description.** Through lecture and demonstration sessions, the student will be able to identify the causes of

distress, determine extent of failure, list advantages and disadvantages of making repairs, and recommend methods of repair with concrete, shotcrete, mortars, epoxy resins, surface coatings, and joint sealants. This course does not cover maintenance and repair of concrete pavements.

**Prerequisites.** Nominee must be assigned (a) Occupational Series: Selected 0800 series; (b) GS-05 or above; (c) Other: Student should have a current or projected assignment which involves repair or maintenance of concrete.

<u>Session</u>	<u>Location</u>	<u>Date</u>
2005-1	Vicksburg, MS	04/05/2005 04/08/2005
2005-2	Vicksburg, MS	05/09/2005 05/13/2005

**CONCRETE MATERIALS**

<b>23</b>	<b>Length: 600 Hours</b>	<b>35CMT01A</b>
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**Purpose.** This training develops and broadens the expertise of civil engineers in all aspects of advanced concrete materials technology. The program offered is unique in that there are no other individual short courses or seminars available which offer this extent of graduate training. The long-range objective is to provide continuity of an effective knowledge of concrete technology in each USACE command.

**Description.** Graduate school classroom instruction, seminars, and field trips cover the following: properties and production of concrete; advanced concrete and aggregates; special cement and concrete; and at least one other course which complements concrete materials to provide a minimum of 12 credit hours\* which is a typical one semester graduate school workload.

**Prerequisites.** Nominees must be assigned (a) Occupational Series: Selected 0800; (b) Grade: GS-07 or above. Nominees must have a bachelors degree in civil engineering or a related discipline.

\*Up to 15 semester hours of college credit (graduate level) may be obtained.

This course is offered through the graduate program in the Civil Engineering Materials Area at Purdue University. If you are interested in applying, please contact Professor Menashi Cohen directly, Professor of Civil Engineering, Purdue University, telephone number 765-494-5018, e-mail: mcohen@ecn.purdue.edu.

**CONCRETE—QUALITY VERIFICATION**

<b>21</b>	<b>Length: 36 Hours</b>	<b>35QVC01A</b>
<b>CEUs: 2.4</b>	<b>LUs: 24</b>	<b>Tuition: \$1,280.00</b>

**Purpose.** This course provides the participant with the specific knowledge of materials, techniques, and procedures for quality verification of concrete construction.

**Description.** Through lectures and conference sessions, this course covers concrete construction and

inspection procedures including such subjects as materials, sampling, testing, handling, mixing, placing, consolidating, finishing, curing, and other miscellaneous items. Concrete construction problems and solutions will be covered.

**Prerequisites.** Nominees must be assigned (a) Occupational Series: 0802, 0809, and 0810; (b) Grade: GS-05 or above. Students should have a current or projected assignment as general or concrete construction quality assurance representatives or related duties at the field level. This course is also well suited for junior engineers and for Corps division, district, and field office personnel directly concerned with concrete operations.

**Notes.** This course is also available in video-based format. Refer to Concrete-QV course (731).

Session	Location	Date
2005-1	Vicksburg, MS	11/15/2004 11/19/2004
2005-2	Vicksburg, MS	01/31/2005 02/04/2005

 **CONCRETE—QV**

**731** Length: 40 Hours  
**LUs: 32** Tuition: \$250.00

**Purpose.** This course provides the graduate with the technical knowledge, both theoretical and practical, to verify concrete construction with a degree of competency that best protects the interest of the government.

**Description.** The training materials include 1/2" videotape cassettes, a Facilitator's Guide, a Student Study Guide (SSG), and the American Concrete Institute Manual of Concrete Inspection. The SSG will include the videotape narration, task-active exercises and answers (pretest and posttest), reference materials, sample forms, an index, a glossary, and an acronym list.

**MODULES.** The 12 modules of instruction and 1 optional module presented in the course are (a) Quality Assurance Requirements; (b) Fundamentals of Concrete and Concrete Materials; (c) Preparation for Concrete Production; (d) Sampling and Testing Concrete; (e) Preparation for Placing Concrete at the Site; (f) Transporting Concrete; (g) Placing and Consolidating Concrete; (h) Finishing Concrete; (i) Curing Concrete; (j) Form Removal; (k) Joints; (l) Hot-Weather and Cold-Weather Concreting; and Optional Module: Special Concretes.

**Prerequisites.** Nominees must (a) Be high school graduates and (1) have duties, present or projected, as an inspector of concrete construction in the field and (2) have need, in some other capacity, of an in-depth knowledge of concrete construction inspection; and (b) not have attended the traditional Concrete: Quality Verification at the Waterways Experiment Station within the past 5 years. Students should have completed the Construction Quality Management (classroom or exportable) course.

**CONFLICT MGMT & DISPUTE RESOLUTION**

**306** Length: 36 Hours 15NBD01A  
 Tuition: \$2,140.00

**Purpose.** This course is designed to convey the knowledge and hands-on experience which makes dispute prevention and resolution a part of each Corps of Engineers manager's tool kit for effective decision-making. The skills developed in this course are applicable to every aspect of the work of the Corps. Accordingly, managers from all disciplines within the Corps will find the insights gained in this course helpful in carrying out their responsibilities. The course enables managers to address the types of conflict encountered in project management, regulatory functions, negotiating local cooperative agreements, managing operations and finances, base closure, and in the Superfund/DERP responsibilities of the Corps. Course participants learn about the variety of Alternative Dispute Resolution (ADR) techniques and how to head off potential disputes or mitigate conflicts when they occur. This course is relevant to managers in all divisions within Major Subordinate Commands including, but not limited to, operations, construction operations, planning, engineering, personnel, real estate, resource management, and equal employment opportunity.

**Description.** Topics covered are (a) overview of major conflict situations across Corps programs; (b) how to identify the types of and reasons for disputes; (c) assessing the point in the "Life Cycle of Conflict" most beneficial for intervention; (d) a continuum of Alternative Dispute Resolution (ADR) techniques; (e) use of third parties in Dispute Resolution; (f) how to create "win-win" outcomes; (g) how and when to use Alternative Dispute Resolution (ADR) techniques; (h) planning to avoid and/or decrease litigation costs; (i) understanding the negotiator mediator, conciliator, and facilitator roles; (j) strategies of coalition building; (k) how to reach consensus; (l) what are negotiation and bargaining? what are the differences between positional and interest-based negotiations and when should they be used?; (m) fact-finding skills; (n) dealing with values; and (o) using communication skills of active listening and applying group process techniques to managing disputes.

**Prerequisites.** Nominees must: (a) be Corps Managers: Executive, Middle Management, and Project Managers; (b) have more than 4 years of Corps or other professional level work experience.

Session	Location	Date
2005-1	DFW, TX	04/18/2005 04/22/2005
2005-2	San Francisco, CA	06/13/2005 06/17/2005

**CONST CONTRACT ADMIN**

**366**                      **Length: 36 Hours**                      **41CCA01A**  
**CEUs: 2.5**                      **PDHs: 25**                      **LUs: 25**  
**Tuition: \$1,070.00**

**Purpose.** This course provides a basic review of the DOD acquisition process as it relates to construction contract administration and field administration of fixed-price construction contracts. As an introductory course, it also serves as a developmental link between the construction and engineering career ladders.

**Description.** This course covers the typical construction contract administration procedures and responsibilities required to administer a fixed-price construction contract. The student is provided with the basic tenets of the FAR acquisition process and a detailed review of the construction management functions in a typical field office. The course provides a basic understanding of fixed-price construction contracts, important operative FAR, DFARS, AFARS, and EFARS clauses, legal considerations, and administrative requirements of government contracting. A series of lectures, problem-solving cases, and exercises are presented to highlight the important contractual and procedural issues encountered during the construction contract administration process.

**Prerequisites.** Nominees should be assigned (a) Occupational Series: Selected 0340, 0800, 0905, 1100; (b) Grade: GS-05 to GS-13; (c) Experience: 0-3 years in the construction function; (d) Responsibilities: personnel should be actively engaged in the field administration of fixed-price construction contracts; this course is also for those other series actively and directly involved in the construction contracting process; (e) Knowledge/Skills: nominee should possess a general knowledge of the post-award construction contract process.

Session	Location	Date
2005-1	Huntsville, AL	10/25/2004 10/29/2004
2005-2	Reno, NV	01/24/2005 01/28/2005
2005-3	Tampa, FL	03/07/2005 03/11/2005
2005-4	Annapolis, MD	05/02/2005 05/06/2005
2005-5	Portland, OR	07/11/2005 07/15/2005

**CONST QUALITY MGT**

**29**                              **Length: 20 Hours**                              **35CQM01A**  
**CEUs: 1.5**                              **PDHs: 15**                              **LUs: 15**  
**Tuition: \$630.00**

**Purpose.** This course is designed to be the primary introduction to the Construction Quality Management System as practiced in the Corps of Engineers. The targeted audience is all persons involved in the surveillance of construction contracts.

**Description.** After completing this course, the student will understand the objective of construction quality management related to establishing quality require-

ments, controlling quality during construction, and taking necessary measures to assure quality.

Through lecture and guided discussion sessions, this course covers a background of the system, inclusion of quality in documents, responsibilities of the contractor and the government under this system, implementation, and enforcement. Case studies are used to the maximum with emphasis on student participation.

The course utilizes ER 1180-1-6, Construction Quality Management; ER 415-1-10, Contractor Submittal Procedures (Shop Drawings and Materials); ER 415-1-11, Biddability, Constructability, Operability, and Environmental Review; and ER 415-1-302, Inspection and Work Records.

**Prerequisites.** Nominees must be assigned (a) Occupational series: 0800; (b) Grade: GS-05 or above; (c) Other: Students should have a current or projected assignment as a member of the resident or area engineer's staff whose day-to-day function entails construction contract surveillance and contract administration. Specification writers and designers who establish the quality to be incorporated in the contract documents are eligible for attendance.

**Notes.** This course is also available in exportable format.

Session	Location	Date
2005-1	San Francisco, CA	11/15/2004 11/17/2004
2005-2	San Francisco, CA	11/17/2004 11/19/2004
2005-3	Virginia Beach, VA	05/09/2005 05/11/2005
2005-4	Virginia Beach, VA	05/11/2005 05/13/2005

 **CONST QUALITY MGT (EXP)**

**734**                              **Length: 24 Hours**                              **35CQE01A**  
**LUs: 24**                              **Tuition: \$225.00**

**Purpose.** This course familiarizes Corps of Engineers quality management personnel and others with construction quality management policies, requirements, and procedures.

**Description.** This instructional program is based on approximately 2 hours of videotape instruction broken into 19 submodules of from 5 to 15 minutes each. The instructional program is designed to take 3 full days (24 hours) of instructional time.

**MODULES.** The eight modules of instruction presented in the course are (1) Introduction to Construction Quality Management (5 submodules); (2) BCO Review (2 submodules); (3) The Quality Assurance Plan (2 submodules); (4) The Quality Control Plan (2 submodules); (5) Preconstruction Conference and Coordination Meeting (not divided into submodules); (6) Submittals (not divided into submodules); (7) Government Quality Assurance (5 submodules); and (8) Making the System Work (not divided into submodules).



requirements; and (p) Corps/OSHA relationships. Participants will gain an overall understanding of the various elements that comprise a successful construction safety program and be provided current state-of-art safety technology and methodology as it relates to the Corps of Engineers.

**Prerequisites.** Attendance is open to all Department of Defense and other Federal agency employees who have a need for construction safety and health information or responsibility for enforcing contractual safety requirements. It is recommended that field construction personnel repeat attendance to this course on a three-five year cycle.

Session	Location	Date
2005-1	New Orleans, LA	12/07/2004 12/09/2004
2005-2	San Diego, CA	03/29/2005 03/31/2005



### CONTRACTING OVERVIEW

**742** Length: 24 Hours **41CNO01A**  
**LUs: 21** Tuition: \$225.00

**Purpose.** This course is intended to educate with focus on concepts rather than execution. It provides the student with a basic understanding of the contracting system emphasizing what is involved and why things are done, not how they are done.

**Description.** The training materials include two 1/2" videocassettes, a Facilitator's Guide, and a Student Study Guide. The course is a basic contracting course. Topics include Basic Federal Acquisition Regulation (FAR) System, Basic Responsibilities and Authorities, Acquisition Planning and Competition, Contracting Process, Socioeconomic Programs, Funding Issues, Contract Administration, Special Categories of Contracting, Forms, and Ethics/Standards of Conduct.

**Modules/Submodules.** (1) Introduction to Contracting Overview (no submodules); (2) Defense Acquisition Workforce Improvement Act (DAWIA) (no submodules); (3) Legal Procedural Framework (no submodules); (4) The Corps Contracting Team (no submodules); (5) Acquisition Planning and Competition (6 submodules); (6) The Contracting Process (3 submodules); (7) Kinds of Contracts (5 submodules); (8) Socioeconomic Programs (2 submodules); (9) Contract Administration/Management (8 submodules); and (10) Ethics/Standards of Conduct/Fraud, Waste and Abuse (no submodules).

**Prerequisites.** None. Students should be assigned to or expected to be assigned to a job involved with the procurement or contract administration process. This course is for all military and civilian job series involved in the acquisition process to include contracting, contract administration, project management, planning, resource management, and operations.

### CORROSION CONTROL

**9** Length: 36 Hours **35CCL01A**  
 Tuition: \$1,660.00

**Purpose.** This course familiarizes design engineers and engineers involved with project operations such as structural, mechanical, electrical, etc., with the mechanism of corrosion, the results if unchecked, and the methods of its mitigation. Designers, if familiar with corrosion phenomena, can temper their designs so as to avoid potential problems or make it easier to provide protection.

**Description.** Topics included in this course are: fundamentals of corrosion and engineering alloys; principles of cathodic protection and electrode potentials; design of cathodic protection systems; design considerations; atmospheric corrosion; design for underground cathodic protection systems; types of corrosion; painting practices; sea water corrosion; system test and evaluation; and materials selection. After discussions of fundamentals, course will divide into sections for military programs and civil works applications.

**Prerequisites.** Nominees must be assigned (a) Occupational series: selected 0800; (b) Grade: GS-09 or above; (c) Other: students should be designers or supervisory engineers.

Session	Location	Date
2005-1	Champaign, IL	02/07/2005 02/11/2005

### COST ESTIMATING BASICS

**181** Length: 36 Hours **35CEB01A**  
**CEUs: 3.1** Tuition: \$1,140.00

**Purpose.** This course provides training on basic cost estimating principles and fundamentals. The training is intended for individuals who are entering the Cost Engineering profession with little or no cost estimating experience or who will be responsible for the review or preparation of detail cost estimates for Military Programs, Civil Works, Environmental and other projects as required.

**Description.** This is a non-computer based basic course designed to teach individuals cost estimate preparation, and how to identify and classify costs associated with the construction. Through the use of lectures, visual aids, and individual and group practical exercises, the course provides instructions on: (a) an overview of procurement and cost engineering regulations; (b) work breakdown structures; (c) reading construction drawings; (d) quantity calculation and development; (e) performing manual quantity takeoffs; (f) determining labor costs and crew composition; (g) estimating costs of equipment, material, and supplies; (h) developing indirect costs; (i) determining cost escalation and contingencies; and (j) preparing estimates summaries.

**Prerequisites.** Nominees must be assigned (a) Occupational series: selected 0800; (b) Grade: GS-05 through GS-09; (c) Other: nominees must obtain CECW-EIC approval before attending this course. A pocket calculator is required for this class.

**Notes.** This course has a precourse assignment. The student should bring their completed precourse assignment with them to the course. This course contains requirements which are mandatory for course completion and may require an estimated 8 hours of overtime. It is the student's responsibility to certify the amount of time expended on these requirements to the supervisor when overtime compensation is requested.

Session	Location	Date
2005-1	Phoenix, AZ	03/14/2005 03/18/2005
2005-2	Huntsville, AL	06/13/2005 06/17/2005

**COST REIMBURSEMENT**

**1** Length: 36 Hours 41CRC01A  
 CEUs: 2.5 PDHs: 25 Tuition: \$940.00

**Purpose.** This course provides practical guidance on how to structure, solicit, and manage cost-reimbursement contracts. The course is suitable for all functional elements, but is primarily geared to the Corps construction execution workforce. The course directly supports the Corps vision by addressing many contemporary issues regarding the management of innovative contracts and supports the "Best Value" selection process.

**Description.** This course covers the acquisition strategy, source selection, and management of cost-reimbursement contracts. The instruction and text material addresses solicitation preparation to final closeout of cost-reimbursement contracts. Specific subjects addressed include the history of cost-reimbursement contracts, acquisition policies, selection of contract type, preparation of the request for proposal, source selection procedures, cost accounting, procurement and property management, Work Authorization Document (WAD) and Earned Value Systems for cost control, fee and profit policies, Corps organization and management, contractors organization, and final closeout.

**Prerequisites.** Nominees should be assigned (a) Occupational Series: 0028, 0340, 0560, 0800, 0905, and 1100; (b) Grade: GS-11 or above; Military—Captain or above; (c) Responsibilities: personnel should be assigned or actively engaged in the administration of a current or future cost-reimbursement contract or to a start-up team for a cost-reimbursement contract; (d) Knowledge/skills: nominee should possess a general knowledge of contracting procedures and construction contract administration; (e) Prerequisite training: nominee should have completed the basic Construction Contract Administration course (No. 366).

Session	Location	Date
2005-1	Huntsville, AL	01/24/2005 01/28/2005
2005-2	Kansas City, MO	06/06/2005 06/10/2005

 **CQC-BRIDGE TO SUCCESS**

**745** Video Run Time: 14 min. 54CQC01A  
 Tuition: \$25.00

**Purpose.** This training film presents a uniform set of facts about the typical construction contract CQC system in the form of an overview geared toward the contractor. It may be used during preconstruction or coordination meetings and addresses what is expected of the contractor during construction. It is accompanied by EP 715-1-2. No student study guide or facilitator guide accompanies this program

**Prerequisites.** Each quality assurance personnel or supervisor assigned to a Corps construction contract should view the program. Attendees should have a knowledge of construction practices for each discipline under their purview and a general knowledge of the building codes or standards for those disciplines.

 **CQM FOR CONTRACTORS**

**784** Length: 16 Hours  
 CEUs: 1.3 Tuition: \$125.00

**Purpose.** This course familiarizes contractor personnel with the Corps of Engineers Construction Quality Management concepts and procedures.

**Description.** The training is formatted in the following eight modules of instruction: (1) Introduction; (2) Contractor's Review; (3) Quality Management Planning; (4) Preconstruction Conference and Coordination Meeting; (5) Submittals; (6) Quality Management During Construction; (7) Making the System Work; and Optional Module (8) the Resident Management System.

**Special Guidance.** Under the revised requirements of CEGS-01451, Contractor Quality Control, it is mandatory that this course be successfully completed to be approved as the contractor's quality control manager.

Upon successful course completion, certificates are valid for five years.

 **CQM-CD ROM**

**795** Length: 24 Hours  
 LUs: 24 Tuition: \$75.00

**Purpose.** This course familiarizes Corps of Engineers quality management personnel and others with construction quality management policies, requirements, and procedures.

**Description.** This course is a CD-ROM version of Construction Quality Management. The instructional program is designed to be taken self-paced. The course can be taken for review in small groups with a facilitator. However, for credit the course must be



works organization, the Administration, and the Congressional committees that provide legislative oversight of the civil works program through authorizations and appropriations; (2) program development, including new start and continuing programs, and funding capabilities; (3) program defense, including OMB and Congressional hearings; and (4) program execution, including work allowances, reprogramming actions, performance measurement.

**Prerequisites.** Nominees must be project delivery team members, GS-340 program managers, chiefs of organizations that support the Project Management Business Process (e.g., Real Estate, Counsel, Resource Management). Division and district commanders, deputy commanders with civil works missions, and members of the Senior Executive Service are invited to attend this seminar.

**Notes.** The number of spaces available for this seminar is limited. It is important that students are those team members who will benefit most from the training. Therefore, the selection process will be managed in the division office by the Director of Civil Works and Management and in the district office by the Deputy District Engineer for Programs and Project Management.

Session	Location	Date
2005-1	New Orleans, LA	06/14/2005 06/17/2005

### CWMS MODELING FOR WATER MANAGEMENT

**155**                      **Length: 36 Hours**                      **35RTW01A**  
**Tuition: \$2,430.00**

**Purpose.** The Corps Water Management System (CWMS) is the automated information system (AIS) supporting the Corps' water control operations mission. CWMS provides data collection, processing, decision support modeling, data dissemination, and graphics tools to allow each local office to effectively execute their water management mission in real-time. This course will provide water managers the training necessary to effectively use hydrologic and hydraulic modeling software in CWMS for real-time operations. The students will learn advanced features of CWMS, including calibration and execution of model programs in support of the decisions made in the course of Corps project operations.

**Description.** Topics will include: 1) The use of CMWS hydrologic and hydraulic models (HMS, ResSim, RAS and FIA) through the Control and Visualization Interface (CAVI). 2) Calibration and optimization of model parameters in real-time. 3) How to model and evaluate possible hydro-meteorological and operational scenarios in real-time to improve reservoir operations. 4) Advanced CWMS concepts and tools, such as scripting and trials. This class does not address the installation of CWMS or the development of models.

**Prerequisites.** Nominees must be assigned (a) Occupational Series: Selected 0400, 0800, and 1300 (b) Grade: GS-09 or above. (c) Nominees should be water control managers, hydrologists, or hydraulic engineers. (d) Nominees should have some experience and responsibility of real-time reservoir or flood control operations and with the H&H models mentioned above.

Session	Location	Date
2005-1	Davis, CA	06/06/2005 06/10/2005

### DAM SAFETY

**28**                              **Length: 32 Hours**                      **54DAS01A**  
**Tuition: \$1,500.00**

**Purpose.** This course trains managers, engineers, geologists, technicians, and project operating personnel in FOA engineering, construction, and operations divisions on all aspects of the Corps of Engineers Dam Safety Program. The background and history of dam safety in the Corps is covered along with the multidiscipline design, construction, and operational considerations. Details of planning, conducting, and reporting the results of a periodic inspection are included. Guidance on project surveillance by operation personnel along with the Dam Safety Assurance Program are covered in detail. Public awareness and preparedness are included.

**Description.** Through lectures, case histories, and structured student discussions, the course covers all aspects of a dam safety program. The course outlines technical considerations (hydrologic, seismic, geotechnical, electrical/mechanical and structural) as well as the operational requirements (operation, maintenance, surveillance, preparedness, training, and notification). The scope and implementation details of the Dam Safety Assurance Program are covered in detail. Presentations, video modules, case histories, and a walk-through inspection are used to effectively present a multidiscipline approach to the successful monitoring and evaluation of Corps of Engineers dams.

**Prerequisites.** Nominee must be assigned (a) Occupational Series: Selected 0800 and 1350; (b) Grade: GS and WG, as appropriate. The course is intended for all personnel involved in the design, construction, operation, inspection, and maintenance of Corps dams.

Session	Location	Date
2005-1	Vicksburg, MS	03/14/2005 03/17/2005
2005-2	Vicksburg, MS	05/02/2005 05/05/2005

### DESIGN BUILD CONSTRUCTION

**425**                              **Length: 36 Hours**                      **35DBM01A**  
**CEUs: 3.1**    **Tuition: \$1,070.00**

**Purpose.** This course provides current information to Corps of Engineers personnel and customers doing business with the Corps of Engineers on the latest developments, lessons learned and use of Design-Build as a construction method.

**Description.** Topics include: (a) Design-Build Overview; (b) Planning the Acquisition; (c) Special Contract Requirements and Important Clauses; (d) Developing Technical RFP Requirements; (e) Proposal Submission Requirements; (f) Proposal Evaluation Requirements; (g) Source Selection Plans; (h) RFP Completion; (i) Source Selection (j) Contract Award and Beyond; and (k) Contract Management.

**Prerequisites.** Nominees should be individuals involved in Design-Build contracting, including: Engineering, Construction, Contracting, Counsel, Project Management, and Customers.

Session	Location	Date
2005-1	Huntsville, AL	10/25/2004 10/29/2004
2005-2	Reno, NV	01/31/2005 02/04/2005
2005-3	Tampa, FL	04/04/2005 04/08/2005
2005-4	Annapolis, MD	05/02/2005 05/06/2005
2005-5	Houston, TX	06/13/2005 06/17/2005

**DIESEL GENERATORS: BASICS/TESTING**

**106**                      **Length: 36 Hours**                      **54DGN01A**  
**Tuition: \$1,990.00**

**Purpose.** This course provides a general familiarization with the components and systems that make up a diesel generator and teaches the proper testing and checkout procedures to be followed prior to accepting generating units from the construction contractor.

**Description.** Through lectures, visual aids, and demonstration sessions, this course covers such subjects as engine and generator basics, fuel systems, heat transfer systems, generator exciters and regulators, governors, instrumentation, design criteria, various factory and field test procedures, automatic transfer switches, and typical installation problems. A portion of this course will be conducted utilizing a diesel generator unit to perform some typical field tests.

**Prerequisites.** Nominees must be assigned (a) Occupational Series: 0802, 0809, 0810, 0830, and 0850; (b) Grade: GS-07 or WG-07 or above. The broad content of the course is beneficial for technically-oriented construction, design, and maintenance personnel. Nominees should have a current or projected responsibilities that will include power generation specification, procurement, installation, testing or operation. Recommend that nominees complete the Electrical, Mechanical, or General Quality Verification Courses prior to taking this course. Engineers are exempt from this prerequisite requirement.

Session	Location	Date
2005-1	Denver, CO	06/20/2005 06/24/2005

**DISTRICT OFFICER INTRODUCTORY COURSE**

**334**                      **Length: 68 Hours**                      **41DOI01A**  
**CEUs: 6.7**                      **Tuition: \$4,100.00**

**Purpose.** This course is designed to orient the newly assigned engineering officer who is an engineer by training but has done little or no business in the USACE environment. The course provides a broad overview of the organization and covers a wide range of topics relating to all facets of the Corps of Engineer's mission.

**Description.** Course is structured to take students through all phases of military and civil works projects. Specific topic areas include programming, budget design, project management, acquisition, planning, contracting, construction contract management, legal considerations, and environmental issues. Case studies and practical exercises are utilized to enhance the student's understanding of specific subject matter in selected areas of the course. The course is designed to familiarize the student with the field operating environment.

**Prerequisites.** Nominees will be nominated by HQDA (Engineer Branch), the Military Personnel Division (CEHR-M) of HQUSACE, division and district commanders, and laboratory directors. Nominees should be (a) Occupational branch series: 21; (b) Paygrades: 02, 03, or 04; (c) newly assigned officers who will be assigned duties within the USACE environment in the Area of Concentration (AOC) 21D; (d) newly assigned civilian personnel GS-12 and above.

**RELATED INFORMATION.** No quotas are allocated from the Annual Training Needs Survey because course attendees are nominated and approved by commanders and directors in the command structure. Nominees are notified of course attendance within 60 days of the start date. Even though nominees are being directed to attend this course as outlined in ER 350-3-5, funding is accomplished through the tuition method. Corps organizations will be billed in accordance with Corps standard operating procedures.

**NOTE:** This training is part of the approved training for Engineering Officers. Course attendance is recorded in the official personnel files (ORB).

Session	Location	Date
2005-1	Huntsville, AL	12/07/2004 12/16/2004

**DIVING INSPECTOR**

**397**                      **Length: 40 Hours**                      **33DIS01A**  
**Tuition: \$2,390.00**

**Purpose.** This course provides Corps of Engineers employees who have quality assurance, safety, and/or oversight responsibilities for diving contractor activities and/or operations. This training provides attendees

with the necessary skills, knowledge, and abilities to safely and successfully perform inspections and oversight of diving contractor operations.

**Description.** This course consists of both classroom discussions and open-water exercises. In-depth training sessions cover the following topics: (a) diving physics; (b) diving physiology; (c) dive tables; (d) SCUBA equipment and operations; (e) surface supplied air equipment and operations; (f) diving support equipment; (g) diving in contaminated water; (h) underwater tools; (i) diving accident management; (j) dive planning and contractor submittals; (k) Corps of Engineers regulations; and (l) inspection of diving operations.

**Prerequisites.** Nominee must have a current or projected assignment to a position that requires knowledge of contractor diving operations, and must not be a Corps of Engineers diver or diving supervisor. Attendees must participate in all exercises and score at least 70 percent on the comprehensive post-course examination.

<u>Session</u>	<u>Location</u>	<u>Date</u>
2005-1	Key West, FL	12/06/2004 12/10/2004

**DIVING REFRESHER**

**259**                      **Length: 64 Hours**                      **54DVR01A**  
**Tuition: \$2,880.00**

**Purpose.** This course provides Corps divers and diving supervisors with the latest technical and managerial data as it relates to underwater diving. This course is required at 4-year intervals after completing the Working Diver course (replaced Diving Safety and Diving Supervisor courses) as stated in ER 385-1-86 for those persons working with underwater diving programs. Students will satisfactorily complete all aspects of the training to receive certification.

**Description.** Through lectures and demonstration sessions, this course covers (a) state-of-the-art diving equipment and procedures; (b) latest developments in accident management techniques; (c) refresher training in decompression tables; (d) refresher training in repetitive diving; (e) refresher training in diving medicine; and (f) recompression chamber experience.

**Prerequisites.** (a) Attendees must have successfully completed the Working Diver course.\* Divers should have a current or projected assignment in diving activities and have passed a diving medical examination within the previous 12 months. Verification of medical exam will be required at the course. (b) Attendees must make at least 70 percent on comprehensive post-course examination for recertification. (c) Attendees must participate in and complete all phases of instruction. Failure to participate in all class activities will be cause for course failure.

\* The Corps of Engineers Diver/Supervisor Certification Card (wallet) will be required at the course.

<u>Session</u>	<u>Location</u>	<u>Date</u>
2005-1	Key West, FL	03/08/2005 03/17/2005

**DPW BUDGET/JCA**

**981**                      **Length: 32 Hours**                      **42DBF01A**  
**Tuition: \$1,200.00**

**Purpose.** This course is for Personnel working at a DPW Installation as a Budget Chief, Budget Analyst, Budget Assistant, Resource Management (RM) Branch Chief, Engineering Team Leader, or other personnel responsible for financial management of installation Real Property Maintenance Activity (RMPA) Resources. The course provides a concentrated look at the Integrated Facilities System (IFS) Job Cost Accounting (JCA) module's role as a tool to manage the financial aspects of work accomplished by the DPW. The scope of the presentation includes both RPMA resources interfaced to the installations financial management system and project work maintained internal to IFS only.

**Description.** Through lectures, individual study and class exercises, this class teaches students how to enter cost data into IFS, how obligations and expense's are related to engineer work documents in the system, and how costs/hours/EOR information are passed to other accounting systems. Students will learn those IFS tables which affect the Job Cost function, those tables which must be built with unique installation data, and how to set up those tables for the proper functioning of the IFS Job Cost Accounting function. Also covered are the interactions between Job Cost Accounting and other IFS functional areas.

**Prerequisites.** Nominees should have a minimum of 3 months experience of on-the-job exposure of Job Cost Accounting and other related systems. Series: 0500, 0800; Grade: GS-07 thru GS-13. Students should be DPW Installation Personnel.

<u>Session</u>	<u>Location</u>	<u>Date</u>
2005-1	Huntsville, AL	07/26/2005 07/29/2005

**DPW IFS INTRODUCTION**

**971**                      **Length: 32 Hours**                      **Tuition: \$1,200.00**

**Purpose.** To teach Directorate of Public Work (DPW) Installation Personnel who work on the Integrated Facilities System (IFS) the following: (1) What IFS is; (2) What the Screens can do; (3) Show what Screens do; (4) Give the students information on "SQL" and (5) show what reports can be pulled with SQL.

**Description.** This course will cover all the modules of the Integrated Facilities System (IFS). The students will learn the following: (1) How to sign on to IFS; (2) Splash Screens; (3) Menu Bar; (4) Tool Bar; (5) How to go to the Modules; (6) Basic SQL.

**Prerequisites.** DPW Installation Personnel who work on the Integrated Facilities System (IFS).

This course is for DPW Installation Personnel.

<u>Session</u>	<u>Location</u>	<u>Date</u>
2005-1	Huntsville, AL	02/07/2005 02/10/2005
2005-2	Huntsville, AL	06/06/2005 06/09/2005

**DPW JOB ORDER CONTR ADV**

**991**                      **Length: 24 Hours**                      **441DJA01**  
**Tuition: \$1,200.00**

**Purpose.** This course teaches students strategies and procedures for technical discussion and negotiation with contractors in the JOC task order process. JOC is most applicable to the Directorate of Public Works (DPW) organization on an Army installation or community.

**Description.** Through lectures and a contract negotiation workshop, this course covers preparation for negotiation, conduct of negotiation sessions, alternatives, and documentation. It also provides students with an understanding of the overall process of contract changes, modifications, and claims and prepares individuals to perform their roles in the contract actions applied to JOC.

**Prerequisites.** It is recommended that nominees be Army installation DPW or supporting contracting office personnel that are, or expect to be, performing as JOC project managers, ordering officers, or contract administration personnel. Contractor personnel are not eligible to attend. It is advisable to have completed the Job Order Contracting, Basis Course and have at least one year working experience with JOC prior to taking the Job Order Contracting, Advanced Course.

Note: Attendees need a calculator to benefit from the Practical Exercises that are an integral part of the course.

<u>Session</u>	<u>Location</u>	<u>Date</u>
2005-1	Huntsville, AL	05/03/2005 05/05/2005
2005-2	Huntsville, AL	06/21/2005 06/23/2005

**DPW JOB ORDER CONTR, BASIC**

**990**                      **Length: 32 Hours**                      **41DJB01A**  
**Tuition: \$1,200.00**

**Purpose.** This course teaches students the basic policies, and procedures for properly executing sustainment, restoration, and modernization (SRM) projects using a Job Order Contracting (JOC) contract applicable to the Directorate of Public Works organization on an Army installation or community.

**Description.** The course covers the elements of JOC; task order scoping; task order proposal requesting, receiving, reviewing, evaluation, negotiation, and docu-

mentation; task order placement by ordering officers; key JOC management issues; and contract administration procedures under JOC. The underlying themes through all the modules of the course emphasize a cooperative working agreement between contractor and government; efficient and timely processing and completion of projects; and adherence to proper contract administration procedures.

**Prerequisites.** The nominees for this course may include any DPW and contracting office personnel. However, the course is specifically oriented for personnel assigned or about to be assigned duties in the JOC activity within the DPW, and personnel of the supporting contracting office that will be involved in JOC contract administration.

<u>Session</u>	<u>Location</u>	<u>Date</u>
2005-1	Huntsville, AL	02/08/2005 02/11/2005
2005-2	Huntsville, AL	03/22/2005 03/25/2005

**DPW PERFORMANCE-BASED SERVICES ACQ**

**974**                      **Length: 36 Hours**                      **41PBC01A**  
**Tuition: \$1,200.00**

**Purpose.** This course is for supervisors, technical and project managers, contracting officers, contracts specialists, and technical personnel involved in the administration of Performance-Based Contracts. This course addresses the regulatory requirements, policies and procedures governing PBSC and service contract administration. It incorporates recent DoD guidance addressing techniques for Performance-Based Services Acquisition using Commercial Item acquisition procedures.

**Description.** Through lectures, individual study, and work group activities, this course provides a detailed description of PBSC methods.

The course has three components. In the first component the emphasis is on the Pre-Award phase of DPW Performance-Based Services Contracting. In this component; unique PBSC terms and definitions and the structure of the contract is demonstrated through the use of examples and discussion. The systems approach to job analysis is covered in detail with examples and exercises which are used as the building blocks for required solicitation documents. Development of the pricing schedule and Performance Work Statement are addressed in detail and reinforced in practical exercises. Emphasis is placed on identifying performance indicators, objectives, and standards, and the desired performance thresholds. The importance of market research is stressed in identifying commercial products or services available that might satisfy Government needs. New rules and procedures which allow the Government to select contractors with proven performance records are explained. The importance of selecting the contractor that offers the best value to the Government is identified.

In the second component the emphasis is on the Post-Award phase of DPW Performance-Based Services Contracting. Applicable FAR clauses, special PBSC contract clauses, and unique PBSC terms and definitions are presented and the structure of the contract is demonstrated through the use of examples and discussion. Contractor quality control requirements are discussed and Quality Control Plan evaluation procedures are provided. Surveillance monitoring techniques are addressed, including selecting the surveillance method, scheduling surveillance activities, evaluating and documenting observation results, initiating corrective actions, and adjusting the surveillance plan. Use of the Quality Assurance Surveillance Plan (QASP) in required services performance is covered. Emphasis is on assessing the contractor's management and performance metrics and partnering with the contractor to prevent problems, rather than on identifying problems and subsequently correcting them. Surveillance methods are explained and the efficiency and effectiveness of random sampling techniques are demonstrated. The emphasis on payment deductions is reduced; however, some exercises are still included to illustrate calculations for payment deductions for non-performance or unsatisfactory performance. Contract administration functions are addressed including delivery order administration, contract modifications, liquidated damages, contractor claims, and contract close-out procedures.

The third component is devoted to practical exercises to the pre-award phase (first component) and the post-award phase (second component).

Other: Attendees are requested to bring examples of contracts, contract actions, and modifications which are conducive to a Performance-Based Services Contract vehicle. Those examples will be critiqued and the information gained provided to the attendees with the goal of enhanced Performance-Based Services Contracting practices and processes in a real-world environment.

**Prerequisites.** None; however, familiarity with the federal procurement process is recommended and prior contracting experience is helpful. Nominees should include contracting officers, contracts specialists, facilities managers, maintenance staff, planners, estimators, and quality assurance evaluators who will be involved in administering service contracts.

Note: Attendees need a calculator to benefit fully from the Practical Exercises that are an integral part of the course.

Session	Location	Date
2005-1	Huntsville, AL	05/23/2005 05/27/2005
2005-2	Huntsville, AL	07/18/2005 07/22/2005

### DPW PROGRAM MANAGEMENT

**999**                      **Length: 30 Hours**                      **15DMF01A**  
**Tuition: \$1,200.00**

**Purpose.** This course provides students with an insight into the functional relationships between Operations & Maintenance (O&M), Engineering Plans & Services (EP&S), Engineer Resource Management (ERM) and other Directorate of Public Works (DPW) key personnel and those with Army installation organizations.

**Description.** Through lectures and an intensive practical exercise, the course centers around the ERM, O&M and EP&S Divisions' requirements to direct, coordinate and control DPW operations, such as Master Planning, Resource Management, Execution of the work of Master Planning, and an Annual Work Plan. The course uses lectures, small group instruction, and practical exercises to reinforce the objective.

**Prerequisites.** Nominees must have taken the DPW Basic Orientation Course, # 988, and the DPW Management Orientation (DPWMOC) Course, # 989. Nominees must work as a Branch Chief at a Directorate of Public Works (DPW). Nominees must have two (2) years experience working with the Directorate of Public Works (DPW). US Army Corps of Engineers nominees must work with Installation Support personnel.

Session	Location	Date
2005-1	Huntsville, AL	02/07/2005 02/11/2005

### DPW PWBOC

**988**                      **Length: 32 Hours**                      **54DBO01A**  
**Tuition: \$1,200.00**

**Purpose.** This course provides students with an overview of the Army Installation Management Concepts, Organization and missions, and Directorate of Public Works (DPW) operations.

**Description.** The course covers the Real Property requirements planning, acquisition planning, financial and work management systems, and operational evaluation procedures, organization, function, and mission of the DPW, and how to integrate real property maintenance activities. Classroom instructions includes lectures, and practical exercises.

**Prerequisites.** It is recommended that nominees be Department of the Army personnel.

Session	Location	Date
2005-1	Huntsville, AL	05/17/2005 05/20/2005



**DPW WORK ESTIMATING**

**983**                      **Length: 32 Hours**                      **46DWE01A**  
**Tuition: \$1,200.00**

**Purpose.** This course is for Directorates of Public Works (DPW) Planners and Estimators, Design Engineers, Shop supervisors and other personnel responsible for and involved in work order estimating for an installation DPW. The course provides a concentrated look at the Integrated Facilities System (IFS) Work Estimating Module and its relationship with Commercial Off the Shelf (COTS) products as tools to give preliminary and detailed estimates of projects managed by the DPW.

**Description.** Through lectures, individual study and class exercises, this class teaches students how to enter estimated jobs into IFS. Students will learn how to phase jobs in IFS, develop a Bill of Materials in Supply 2000, and develop an estimate in WinEstimating. Also covered in this class are the interactions between Work Estimating, and other IFS modules and the importance of the Planner/Estimator relationship with the customer ordering the work and the craft personnel performing the work.

**Prerequisites.** It is recommended that nominees should have three months experience in job estimating, job scheduling or related fields. Series: 0300, 0800. Wage Grades (WD, WS and WG). This course is for DPW installation personnel.

<u>Session</u>	<u>Location</u>	<u>Date</u>
2005-1	Fort Lee, VA	01/24/2005 01/27/2005

**DPW WORK RECEPTION**

**980**                      **Length: 24 Hours**                      **46DWR01A**  
**Tuition: \$1,200.00**

**Purpose.** This course is for Service Order Clerks, Work Order Receptionists and Customer Service Personnel or anyone, within the Directorate of Public Works (DPW) on an Army installation or community, who is responsible for receiving the requests and/or processing the customer work requests for an installation DPW. In addition, those who are responsible for responding to work order inquiries to include status information should be included as well.

**Description.** Through lectures, individual study and class exercises, this class provides students with an overview of the entire DPW function with emphasis on the reception of work from the customer. Students will learn how to enter service orders and work orders into the (Integrated Facilities System (IFS) and how to answer service order and work order status inquiries from customers. The course will also describe how the IFS informs the work receptionist that a facility is contaminated or that equipment is under warranty. The philosophy that the customer comes first and the fact

that all DPW jobs are directly related to customer satisfaction will be stressed. This class provides the students with information on customer satisfaction techniques such as how to determine if the shops are behind schedule so as to keep the customer informed of delays. Techniques that can be used to help customers prioritize their own work requests will be demonstrated. Methods for dealing with irate or rude customers will be covered. Work receptionists will learn review and analysis techniques such as random sampling of customers to determine if the DPW is satisfying the customers. Students will learn how to record the results of random sampling and incidents of specific customer satisfaction or dissatisfaction and how to present these results to management.

**Prerequisites.** Nominees should have a minimum of 3 months of on-the-job experience in the area of customer service. This course is for DPW Installation Personnel.

<u>Session</u>	<u>Location</u>	<u>Date</u>
2005-1	Huntsville, AL	04/05/2005 04/07/2005

**DREDGE COST ESTIMATING**

**118**                      **Length: 36 Hours**                      **54DGE01A**  
**CEUs: 2.8**                      **PDHs: 28**                      **Tuition: \$2,130.00**

**Purpose.** This course provides an understanding of cost estimating for dredging projects. Methodology for cost estimating of pipeline, hopper, and mechanical dredging is presented. Training is provided on the use of CEDEP, the official dredge estimating software program.

**Description.** Through lectures, discussion, demonstrations and class problems, the course covers the current requirements for the preparation of dredge cost estimates. Specific emphasis is placed on definitions, equipment selection, productivity and cost detail development in the preparation of cost estimates for projects utilizing pipeline, hopper, and mechanical dredges. These principles are further discussed in relationship to the current (upgraded) EXCEL windows version of the CEDEP software.

**Prerequisites.** Nominees must be assigned (a) Occupational Series: 0800; (b) Grade: GS-07 or above; Nominees are those who have a need to learn more about cost estimates for dredging projects. These employees are envisioned to work in the engineering, operation, planning, or construction divisions of Corps Districts or Divisions. Their educational background should not be less than that of an engineering technician or equivalent. (c) Nominees should be knowledgeable of computer software and computer spreadsheet programs.

**Notes.** Student supplied calculator required.

<u>Session</u>	<u>Location</u>	<u>Date</u>
2005-1	Huntsville, AL	04/25/2005 04/29/2005





ments and to bring appropriate shoes and clothing. Special tours may be available after class hours.

**Notes.** This course contains requirements that are mandatory for course completion and may require an estimated 8 hours of work outside of normal class hours. It is your responsibility to bring this to the attention of your supervisor so that an overtime request can be made by appropriate personnel. It is also your responsibility to certify the amount of time expended on these requirements to your supervisor when you request overtime compensation.

<u>Session</u>	<u>Location</u>	<u>Date</u>
2005-1	Vicksburg, MS	04/25/2005 04/29/2005

### ECOLOGY FOR ENGINEERS

**103**                      **Length: 36 Hours**                      **33EFE01A**

**Purpose.** This course provides Corps of Engineer personnel with basics and state-of-the-art knowledge of ecology. Students are given an overview of current ecological paradigms and procedures to serve as background for impact analysis, environmental management, and ecosystem restoration.

**Description.** Understanding and resolving complex environmental issues for assessing impacts of engineering activities, and managing and restoring ecosystems are increasingly being recognized to require a multidisciplinary effort involving the teaming of ecologists and engineers. The focus of the course will be on integrating basic concepts of ecology with engineering. Terminology, paradigms, goals and basic assumptions particularly for monitoring and modeling will be considered. Lectures on basic ecological concepts and associated case studies will introduce students to current and historical ecological concerns. Exercises with computer-based models and simulations will be used to demonstrate concepts introduced in lectures. The material will be integrated into a consideration of how to apply course material to on-the-job situations. Learning objectives will focus on (1) becoming conversant in current ecological thinking, terminology, and methodology in order to valuably participate in ecosystem management; and (2) being able to identify the conceptual and empirical bases for impacts and restoration at the population, community, ecosystem, and landscape levels.

**Prerequisites.** Nominees must be assigned: (a) Occupational series: 0800, (b) Grade GS-09 and above. This course is meant primarily for engineers who have duty assignments in planning, engineering, construction, operations or regulatory functions; however, physical scientists, social scientists, attorneys, economists, and other professionals with these assignments and with some background in mathematics may find the course useful.

**Notes.** One or more modules of this course may be taught in a distance learning mode. This may cause a

shortening of the length course. Should this happen, offices will be notified immediately.

### ECON ANALYSIS MILCON

**101**                      **Length: 28 Hours**                      **35EAM01A**  
**Tuition: \$1,200.00**

**Purpose.** This course explains the fundamental principles and procedures for developing economic analyses (E/A) in support of military construction and capital investment projects. The practical application of economic principles is provided through "hands-on" computer training sessions in which participants develop economic analyses using the Army's economic analysis package, ECONPACK. Economic Analysis is an integral and required justification for military construction projects and capital investment proposals. This course is specifically designed to enable participants to prepare adequate, analytically accurate economic analyses in support of project funding requests to OSD and Congress. Lectures, work group exercises, practical exercises, and computer sessions are used to familiarize participants with the theoretical principles and automated capability to formulate, develop, document, and evaluate E/A.

**Description.** Specific topics include (a) an overview of economic analysis as it relates to the planning, programming, and review process; (b) the economic analysis process: the logical sequential process used to develop E/A; (c) life-cycle cost analysis: terms and definitions; (d) the concept of equivalence, the time value of money, and the discounting and treatment of inflation; (e) life-cycle cost calculations: net present value, savings-to-investment ratio, discounted payback period; and (f) sensitivity analysis: testing data uncertainties. Students, using the automated system, ECONPACK, will perform calculations, document, and report analysis results. The course covers the automatic transfer of completed economic analyses to a DD Form 1391.

**Prerequisites.** Nominees must be assigned to current positions involved with planning, preparing, programming, or reviewing requests for government construction or capital investment projects.

**Notes.** Nominees must bring a pocket calculator to this course. They may also bring an E/A they are currently working on/or have in the processor for review.

<u>Session</u>	<u>Location</u>	<u>Date</u>
2005-1	Huntsville, AL	03/08/2005 03/11/2005
2005-2	Huntsville, AL	08/02/2005 08/05/2005

### ECONOMIC ANALYSIS-WRP

**270**                      **Length: 36 Hours**                      **35EAW01A**  
**Tuition: \$1,580.00**

**Purpose.** This course is designed to provide an overview of the requirements and procedures for conducting

economic analysis of Corps of Engineers water resources planning projects. Some form of economic analysis, including benefit/cost analysis, cost effectiveness analysis and or economic impact analysis is required of all Corps projects, whether they be for flood control, navigation, dredging, water supply, environmental mitigation and restoration or other project purpose. The course is designed to help students better understand the Corps planning process and where they, as economist, fit into that planning process. The course will also provide information on how to think about and analyze new problems and situations.

**Description.** This course includes discussion on (a) the economist's role in the Corps of Engineers (Who is your audience, your customer? What are your products?); (b) introduction on principles and guidelines — how the economist's job is influenced by P&G; (c) how to think as a Corps economist in National Economic Development (NED) terms (including new technologies such as risk and uncertainty); (d) evaluation by project purpose using the NED manuals (the incorporation of R&U into evaluation by project purpose); (e) other evaluation techniques (cost effectiveness, incremental cost analysis, economic impact analysis); (f) the changing role of economic analysis: Environmental Restoration, Rehabilitation, Watershed Planning, Section 216; (g) expected problem areas and how to think about them — emphasis will be on with/without project condition, NED vs. Regional, Economics vs. Cost Sharing; and (h) how to plan your work with emphasis on Initial Project Management Plan (IPMP).

**OBJECTIVES.** Upon successful completion of this training, attendees will be able to (a) define the requirement within P&G for economic analysis in Water Resource Planning; (b) describe the NED concept as defined by the P&G; (c) use the NED Manual Series for project evaluation; (d) identify three different economic analysis techniques; (e) list source information for data required for economic analysis; and (f) list three tools for conducting economic analysis.

**Prerequisites.** This course is designed primarily for NEW Corps Economists and/or those personnel requiring a basic understanding of what economists do in conducting economic analysis of water resources projects, particularly project managers.

<u>Session</u>	<u>Location</u>	<u>Date</u>
2005-1	Alexandria, VA	03/15/2005 03/19/2005

**ECOSYSTEM PLANNING & MANAGEMENT ISSUES**

**264**                      **Length: 36 Hours**                      **33AER01A**  
**Tuition: \$2,520.00**

**Purpose.** This course provides a specialized base of knowledge for effectively dealing with major current ecological resources issues and integrating them into an ecosystem setting. All aspects of land and water resource management are increasingly impacted by

evolving technical and political issues. Many issues are applicable to entire regions or the nation, and this course provides a forum for discussing current topics and the potential alternatives for resolving problems. Focus is on the technical underpinnings of issues, recognizing that technical, policy, and procedural topics are intertwined.

**Description.** Current ecological issues will be presented through a series of seminars, lectures, exercises, and case studies. Issues on the agenda include (a) what is ecosystem restoration and is it ALL good? (b) is the Corps the right agency to do ecosystem restoration? (c) how can we communicate better to do it better? (d) non-monetary and monetary benefit evaluations and justifications, (e) intraagency and interagency goals relative to resources and their conflicts, (f) threatened and endangered species versus diversity, (g) cumulative effects and downstream effects from upstream actions, and (h) evolving demands on public lands. Additional issues will be identified and selected through group forums. Focus is on the relationship of issues to actions and responsibilities required of Corps districts and military installations. Instructors will provide background information on selected topics, and case studies will be used to illustrate planning and management issues in the community, at projects, and at military installations. Students will interact through group forums to discuss and search for alternative resolutions to issues affecting application of ecosystem management concepts in their work. As an illustration of class material covered for issue (b) above, students discuss the Corps and the role of all its elements, ecosystem structure and function at the land and water interface, the Corps' role in introducing and managing disturbance, and what can be expected technically from other agencies with similar programs.

**Prerequisites.** a. This course is primarily for personnel in Planning, Operations, or Project Management functional areas. Military installation natural resources personnel would also benefit. b. Grade: GS-09 and above. c. A Bachelor of Arts or Science degree or higher. d. Occupational Series: 0100, 0200, 0400, 0801, 0807, 0810, 0819, 0905, 1301, 1315, and 1350.

<u>Session</u>	<u>Location</u>	<u>Date</u>
2005-1	Lafayette, LA	07/18/2005 07/22/2005

**ECOSYSTEM RESTORATION**

**280**                      **Length: 36 Hours**                      **33ECR01A**  
**Tuition: \$2,000.00**

**Purpose.** The restoration and protection of environmental resources in our Nation's ecosystems is a project purpose in the Corps of Engineers civil works program. This course will provide an interdisciplinary perspective on ecosystem restoration, protection, and management. Students will learn the principles and vocabulary of selected disciplines outside their own and will become familiar with relevant case studies and issues in planning and conducting ecosystem restoration projects.

At the end of the course, students will have a more holistic understanding of ecosystems and the requirements for successfully restoring, protecting, and managing them.

**Description.** Through a series of lectures, practical exercises, and field trips, students will be introduced to basic concepts in ecology, hydrology, geology, and soil sciences as they interrelate within a given ecosystem. These basic concepts will be explored and evaluated for their roles in the restoration, protection, and management of degraded ecosystems. Emphasis will be on ecological interactions and scale-dependent relationships among water, soil, and biota. The structures and functions within an ecosystem will be discussed and related to real-life situations and projects, as appropriate. Relevant models and computerized tools will be demonstrated (e.g., decision support systems, landscape metrics, etc.).

**Prerequisites.** (a) This course is meant primarily for engineers and scientists involved in the planning, operation, and management of ecosystem restoration projects, including permits under the Clean Water Act that would involve ecosystem restoration; (b) Grade: GS-09 and above; (c) A Bachelor of Arts or Science degree or higher; and (d) Occupational series: 0200, 0100, 0400, 0801, 0807, 0810, 0819, 0905, 1301, 1315, 1350.

Session	Location	Date
2005-1	Vicksburg, MS	05/16/2005 05/20/2005

**ELECTRICAL DESIGN I**

**373** Length: 36 Hours 35ED101A  
**CEUs: 3.3** PDHs: 33 Tuition: \$1,740.00

**Purpose.** This course clarifies criteria and practices to assure an adequate design and review of electrical features of government projects and to improve design quality and incorporate AT/FT requirements. The course will develop the complete electrical design of a 40,000 square foot office building, including sizing of service, distribution equipment, feeder and branch conductors, transformers, panelboards, grounding components, fire alarm and fire pump, exterior and interior lighting, lightning protection, energy savings, protective devices, coordination and power requirements.

**Description.** (a) INTRODUCTION AND DESIGN PROCESS: This session discusses project development and provides an overview of DD Form 1391, design construction and post completion steps, and cost codes. An overview of the site plan, floor plan, and one-line diagram is presented. (b) DESIGN-BUILD: This session will discuss the Design-Build process in general and the development of the electrical requirements for the Request for Proposals (RFP) package. (c) FACILITY CONNECTION/ONE LINE DIAGRAM: This session develops a one-line diagram from the electrical distribution system connection to the building service entrance equipment. Emphasis is on equipment selection and

sizing in accordance with DoD criteria, codes, and good engineering practice. Protection and coordination requirements will be discussed. (d) LIGHTING DESIGN: This session includes selection and application of interior and exterior lighting fixtures and emergency and exit lighting systems. Interior lighting calculations (using the zonal cavity method) and exterior lighting calculations (using the point-to-point method) are discussed and demonstrated. (e) ELECTRICAL CALCULATIONS: This session includes calculations for branch circuits and feeders, fire pump motor circuits, and panel schedules; short-circuit currents (using the per-unit system and the point-to-point method), voltage drop calculations, and demand and diversity factors. (f) FIRE ALARM AND LIGHTNING PROTECTION SYSTEMS: This session discusses the specific application of NFPA 72 and 101 to the design of the office building. Placement of notification appliances and signaling devices are determined along with the development of the riser diagram. Also covered is the design of the building lightning protection system using NFPA 780 and TM 5-811-3. (g) ELECTRICAL POWER SYSTEMS. This session discusses the electrical design requirements for UPS, harmonics, transformers, surge protection, grounding, and emergency power. Energy savings and design considerations will be presented.

**Prerequisites.** Nominees must be assigned (a) Occupational Series: 0801 (with electrical background), 0850, and 0855. Nominees should be electrical or electronic engineers or have electrical engineering responsibilities. Nominees should have a basic background in the practical applications of electrical and electronic projects.

**Notes.** Student should bring a calculator and a copy of the current NEC.

Session	Location	Date
2005-1	Las Vegas, NV	03/07/2005 03/11/2005

**ELECTRICAL DESIGN II**

**374** Length: 36 Hours 35ED201A  
**CEUs: 3.3** PDHs: 33 Tuition: \$1,930.00

**Purpose.** This course clarifies criteria and practices to assure an adequate design or review of electrical features (including AT/FP requirements) of military and civil projects. The course should increase proficiency in the design/review of electrical systems, improve design quality, reduce project cost, and eliminate/reduce field change orders due to design deficiencies during the construction phase to minimize the cost growth.

**Description.** (a) COURSE OVERVIEW: This session discusses the required steps in the development of electrical system designs for military and civil work projects. (b) POWER SYSTEM CONFIGURATION: This session discusses the methods to configure a power system for reliability. Main emphasis is on double-ended configuration. (c) ALTERNATE POWER SYSTEMS: This session discusses design require-

ments for uninterruptible power supply (UPS), standby, and emergency power systems for various types of facilities. (d) ENGINE GENERATOR SET APPLICATIONS: This session acquaints the designer with the components of engine generators and discusses the design parameters and features for engine generator set applications. (e) ELECTRICAL ENERGY SAVINGS: This session discusses the electrical energy conservation system in some detail. Calculations and system design and examples are presented. Examples and calculation of voltage drop, power factor, system voltage, harmonics, linearity, balancing radial/loop systems, overhead/underground, grounding, electrical distribution systems, and other electrical issues are included. (f) FIRE ALARM SYSTEMS: This session includes discussion of the design requirements of signaling and detection circuits. Also included is the design of the fire protective signaling systems based upon NFPA and DOD requirements. (g) HARMONICS: This session discusses the design of electrical distribution systems where non-linear loads exist. The effect of harmonics on linear loads is discussed. Design considerations and options to minimize the effects of harmonics are presented. (h) CATHODIC PROTECTION: This session discusses galvanic corrosion and design of sacrificial cathodic protection systems. (i) CIVIL WORKS: This session discusses electrical systems used in civil work projects including pumps, motors, and controls; water control structures; diesel-engine-driven generators, transfer switches, gate control systems and recreational facilities. (j) WIRING SYSTEMS AND APPLICATION ISSUES: This session discusses wiring and cabling, telephone, and fire protection systems including fiber optic cable applications. (k) AIRFIELD LIGHTING: This session discusses the electrical wiring system requirements for airfield lighting and control. Design issues will be presented and discussed. (l) DESIGN ISSUES: Using knowledge gained in the design course, the students will, with the help of the instructors, improve design quality and cost effectiveness of their projects. Practical examples and design problems will be discussed.

**Prerequisites.** Nominees must be assigned Occupational Series: 0850, 0855, and 0801 (with an electrical background) or equivalent electrical professions. Nominees should be electrical and electronics engineers with a background in the practical applications of a wide range of electrical and electronic projects.

**Notes.** Student should bring a calculator.

Session	Location	Date
2005-1	Orlando, FL	02/07/2005 02/11/2005

### ELECTRICAL EXTERIOR DESIGN

**90** Length: **36 Hours** **35ESC01A**  
**CEUs: 3.3** **PDHs: 33** **Tuition: \$1,950.00**

**Purpose.** This course presents an overview of the basic rules to be followed in the design, construction and maintenance of electrical substations, grounding,

switchyards, overhead and underground power and communication lines, and coordination. It provides a sound basis for understanding the intent of the National Electrical Safety Code (NESC), applies the code in practical situations, and presents the Corps' policy and guidance, as documented in technical manuals and guide specifications. AT/FP requirements are also discussed.

**Description.** (a) INTRODUCTION: This segment presents the Technical Manuals and Unified Facilities Guide Specifications applicable to exterior design. The development, structure and application of the NESC is also presented in this introductory session. The responsibilities of utility system operators are stressed in the discussion of rules covering the purpose, scope, application and intent of the code. A general discussion of electrical loss versus equipment costs illustrates why different voltage levels are used for different applications. (b) GROUNDING: This portion addresses fundamentals of grounding and a discussion of the grounding rules. The fundamental discussion includes earth grounding, operation of protective equipment, flow of current to the electrode and its transfer to the earth, and electrode effectiveness. Grounding rules cover the point of connection of the grounding conductor, the grounding conductor properties, the means of connection, grounding electrodes and methods of connection, and ground resistance. Special attention is given to the allowed connections between grounding conductors and electrodes serving low-voltage secondary circuits and those serving high-voltage distribution lines and equipment. (c) ELECTRIC SUPPLY STATIONS: This segment presents equipment arrangements in substations including enclosure of equipment and equipment selection. Also emphasized are requirements for protective grounding, guarding of live parts and working space around live equipment. (d) DESIGN, CONSTRUCTION, AND MAINTENANCE OF OVERHEAD ELECTRIC SUPPLY LINES: This portion addresses the design and construction of equipment, grounding, clearances, and strength and loading. The fundamental concepts and requirements of the NESC are explained and discussed in detail. Students learn to work with design/construction information in classroom discussions. (e) DESIGN, CONSTRUCTION, AND MAINTENANCE OF UNDERGROUND DISTRIBUTION SUPPLY LINES: Emphasis is placed on conduit design/construction, supply cable requirements, direct buried cables, risers and terminations, equipment concerns, and tunnels. (f) POWER SYSTEM PROTECTION AND COORDINATION: This segment identifies the nature of short circuits and short-circuit protection philosophy. Protective device coordination will be discussed in the classroom with sample problems. (g) FACILITY DESIGN: This session develops a detailed design of a facility including connections to power station, overhead/underground wiring system, transformers, service equipment, meters, grounding, and protection systems.

**Prerequisites.** Nominees must be assigned Occupational Series: 0850, 0855 and 0801 (with an electrical

background) or equivalent electrical professions. Nominees should have a basic knowledge of the design and/or construction and maintenance of substations, switchyards, and overhead and underground power.

**Notes.** Students should bring a calculator.

<u>Session</u>	<u>Location</u>	<u>Date</u>
2005-1	Denver, CO	05/16/2005 05/20/2005

**ELECTRICAL QUALITY VERIFICATION**

<b>42</b>	<b>Length: 36 Hours</b>	<b>35ELC01A</b>
<b>CEUs: 3.0</b>	<b>PDHs: 30</b>	<b>LUs: 32</b>
	<b>Tuition: \$1,590.00</b>	

**Purpose.** This course provides the participant with (a) requirements and techniques of electrical quality assurance to comply with contract requirements; (b) increased knowledge of materials, equipment, installation, and quality assurance techniques; and (c) training in interpreting plans and specifications and the National Electrical Code.

**Description.** Through lectures and directed conference sessions, this course presents methods of quality assurance for interior and exterior distribution, motors, controls, lighting, special alarm systems, grounding and hazardous locations, and other electrical installations. It also places emphasis on enforcement of contract requirements, compliance with electrical safety, the electrical code, and the contractor's obligation for quality control under the Corps' quality management program.

**Prerequisites.** Nominees must be assigned (a) Occupational Series: 0801, 0802, 0809, 0810, 0830, or 0850; (b) Grade: GS-05 or above, and equivalent. Students should have a current or projected assignment as an electrical or general quality assurance representative. Engineers are exempt from these eligibility requirements.

<u>Session</u>	<u>Location</u>	<u>Date</u>
2005-1	Phoenix, AZ	07/18/2005 07/22/2005

**ELECTRONIC SECURITY SYS (ESS) DESIGN**

<b>360</b>	<b>Length: 36 Hours</b>	<b>55ESS01A</b>
<b>CEUs: 3.2</b>	<b>PDHs: 32</b>	<b>Tuition: \$1,450.00</b>

**Purpose.** This course provides a basic understanding of the theory and operation of electronic security systems. The course is recommended for personnel who are involved with force protection, design, or construction of military or civil facilities which require electronic security systems.

**Description.** This course covers intrusion detection systems, interior and exterior intrusion detection sensors, closed circuit alarm assessment television, and electronic entry control systems. The course covers basic system description and operational theory, appli-

cation for physical security and force protection, system design information, use of Corps of Engineers criteria documents, and discussion of evaluating and testing installed systems prior to acceptance. Some basic design calculations are included. After completing this course, the student should be conversant in basic interior and exterior sensor application and have a good understanding of the overall design philosophy and application limitations of electronic security systems.

**Prerequisites.** Grade: GS-07 (or Military E-5) or higher involved with using, planning, designing, or managing electronic security systems.

<u>Session</u>	<u>Location</u>	<u>Date</u>
2005-1	Huntsville, AL	02/14/2005 02/18/2005

 **ELEVATOR SAFETY—QV**

<b>748</b>	<b>Length: 32 Hours</b>	<b>35ELE01A</b>
		<b>Tuition: \$225.00</b>

**Purpose.** This course provides the participants with theoretical and practical knowledge of the ASME A17.1a requirements relating to elevator inspection maintenance and testing procedures.

**Description.** The training is organized in the following modules of instruction: (a) Elevators and Escalators; (b) General Requirements; (c) Electric Elevators; (d) Hydraulic Elevators; (e) Escalators and Moving Walks; (f) Auto Transfers and Dumbwaiters; (g) Inclined Elevators; (h) Construction Elevators; (i) Vertical Incline - Wheelchair Lifts; (j) Fire Fighter Service; and (k) Testing.

A field trip is recommended to further enhance this course.

**Prerequisites.** Students should be those persons whose job relates to conveying system design or construction verification. Nominees should be assigned (a) Occupational Series: 0800 and (b) Grade Level: GS-5 to GS-12 or equivalent. Students should have completed the Construction Quality Management (classroom or exportable) course.

**ENV REG PRACTICAL APPLICATION**

<b>398</b>	<b>Length: 36 Hours</b>	<b>33MEC01A</b>
<b>CEUs: 2.2</b>	<b>PDHs: 22</b>	<b>Tuition: \$1,250.00</b>

**Purpose.** This course is designed to further the student's understanding and ability to apply the technical requirements of various major federal environmental regulations. This course consists of a review of the technical application of selected environmental requirements pertinent to compliance issues. It will not consist of an exhaustive, detailed study of environmental statutes and regulations.

**Description.** This course is comprised of discussions and practical exercises pertaining to the technical appli-

cation of various environmental regulations such as RCRA waste classification and generator standards, used oil management, NPDES wastewater and stormwater requirements, SPCC plans, PCB management, Clean Air Act regulations, USTs, SWDA requirements, Spill reporting, Pesticide management, Hazardous materials transportation, and EPCRA requirements. The course also includes a brief introductory session on environmental management systems addressed in EO 13148. This course focuses on the practical application of these regulations during day-to-day compliance activities at DoD installations, Corps construction projects and Civil Works Projects and Facilities.

**Prerequisites.** Nominees must have worked at least one year on environmental compliance projects, environmental projects, military construction projects, or civil works environmental compliance projects or have attended an environmental laws and regulations course within the past three years. Target audience includes engineers, scientists (chemists, industrial hygienists, geologists, etc.), Construction personnel, environmental compliance officers, ECAS and ERGO coordinators, environmental protection specialists, and operations personnel responsible for the technical application of various environmental compliance requirements.

<u>Session</u>	<u>Location</u>	<u>Date</u>
2005-1	Omaha, NE	08/08/2005 08/12/2005

**ENV REMED TECH-CONTAINMENT**

**337**                      **Length: 20 Hours**                      **35HRC01A**  
**Tuition: \$730.00**

**Purpose.** This course provides the student with a practical understanding of waste containment technologies. The information is intended for use by geologists,engineers, chemists, and other professionals involved in project planning, technology selection, design,operation, and optimization of remediation technologies for in-house projects or oversight of contractor efforts on environmental restoration sites.

**Description.** This course offers technical information on the containment technologies listed below. Characterization needs, design, operation, optimization, and close out for these containment technologies are discussed in detail. Concepts are conveyed through lectures, case studies, class problems, and a class field trip. The technologies covered include: Landfill Containment Systems, Solidification/Stablization, Ground Water Collection Trenches, Ground Water Cut-Off Walls, Permeable Reaction Walls, Excavation and Handling of Contaminated Material, Landfarming, and Composting. The course emphasizes the awareness and use of available guidance from the USACE, EPA, Air Force, ASTM and other sources.

**Prerequisites.** Nominees should be in occupational series 1300 or 0800 or working as an Environmental Protection Specialist or Project/Technical Manager on remediation projects. Nominees must be in grades GS-

7 or higher. Courses in soils, hydrogeology, and chemistry would be helpful, but are not necessary.

This course can be taken by itself or as part of the 36-hour course #395 which combines both #371 Environmental Remediation Technologies- Subsurface and #337 Environmental Remediation Technologies - Containmentment.

<u>Session</u>	<u>Location</u>	<u>Date</u>
2005-1	Denver, CO	06/22/2005 06/24/2005

**ENV REMED TECH-SUBSURFACE**

**371**                      **Length: 20 Hours**                      **35HRI01A**  
**CEUs: 1.6**                      **PDHs: 16**                      **Tuition: \$730.00**

**Purpose.** This course provides the student with a practical understanding of several subsurface remediation technologies. The information is intended for geologists,engineers, chemists, and other professionals involved in project planning, feasibility studies, technology screening, remedial design, operation and optimization of remedial technologies for in-house projects or oversight of contractors on environmental restoration projects.

**Description.** This course illustrates the underlying processes, site characterization needs, pilot study design, full-scale design approaches, operational considerations and close out strategies for several subsurface remediation technologies. Concepts are conveyed through lectures, case studies, sample calculations, and a field trip to a local environmental restoration site. The technologies covered include: Ground Water Extraction, Soil Vapor Extraction, Multi-Phase Extraction and Fuel Recovery, Air Sparging, Monitored Natural Attenuation, Bioremediation, Thermal Remediation, InSitu, Chemical Oxidation, Surfactant/Co-Solvent Soil Flushing, and Electrokinetics. The course also emphasizes the existence and use of guidance from USACE, USEPA, ITRC, Air Force, DOE, ASTM and others.

**Prerequisites.** Nominees should be within occupational series 1300 or 0800 or working as an Environmental Protection Specialist or Project Manager on environmental remediation projects. Nominees must be in grades GS-7 or higher. Courses in soils, hydrogeology, and/or chemistry would be helpful, but not necessary.

**Notes.** This course can be taken by itself or as part of the 36-hour course number 395 which combines both course number 371, Env Remediation Technologies-Subsurface and course number 337, Env Remediation Technologies-Containmentment.

<u>Session</u>	<u>Location</u>	<u>Date</u>
2005-1	Denver, CO	06/20/2005 06/22/2005

**ENV REMED TECHNOLOGIES**

**395**                      **Length: 36 Hours**                      **35GHS01A**  
**CEUs: 2.8**                      **PDHs: 28**                      **Tuition: \$1,380.00**

**Purpose.** This course provides the student with a practical understanding of various containment, extraction, and in-situ technologies. The information is intended for use by geologists,engineers, chemists, and other professionals involved in project planning, technology selection, design,operation, and optimization of remediation technologies for in-house projects or oversight of contractor efforts on environmental restoration sites.

**Description.** The course is a combination of Course #371, Env Remediation Technologies - Sub-surface, and Course #337, Env Remediation Technologies-Containment. The two shorter courses are taught back-to-back and the enrollee in this course would attend both in sequence. The two shorter courses share a common class trip to Rocky Mountain Arsenal. Refer to the descriptions of those two courses for more information. The course emphasizes the awareness and use of available guidance from the USACE, EPA, Air Force, ASTM, and other sources.

**Prerequisites.** Nominees should be in occupational series 1300 or 0800 or working as an Environmental Protection Specialist or Project/Technical Manager on remediation projects. Nominees must be in grades GS-5 or higher. Courses in soils, hydrogeology, and/or chemistry would be helpful, but are not necessary.

NOTE: Portions of this course can also be taken separately as either the 20 hour course #371, Env Remediation Technologies - Subsurface, or the 20 hour course #337, Env Remediation Technologies-Containment.

<u>Session</u>	<u>Location</u>	<u>Date</u>
2005-1	Denver, CO	06/20/2005 06/24/2005

**ENV REMEDIATION OVERVIEW**

**350**                      **Length: 20 Hours**                      **56HTR01A**  
**CEUs: 1.1**                      **PDHs: 11**                      **Tuition: \$970.00**

**Purpose.** This is an introductory course for technical and management personnel having responsibilities in USACE Superfund, DERP, and other Environmental Restoration (ER) programs, as well as those of other DoD agencies. This course provides an overview of the Corps' role in ER programs, including programmatic, legal, and technical aspects of hazardous, toxic and radioactive waste (HTRW) site cleanup activities.

**Description.** The course consists of classroom instruction summarizing USACE management and/or execution of Environmental Restoration (ER) programs such as the Defense Environmental Restoration Program (i.e., Installation Restoration-IRP, Formerly Used

Defense Sites-FUDS) Base Realignment and Closure (BRAC), EPA Superfund, USACE-Formerly Utilized Sites Remedial Action Program (FUSRAP), and Support for Others programs. The course addresses the Corps' organizational structure re: environmental restoration, ER project management,contracting strategies, applicable environmental laws and regulations, community relations, ordnance and explosives considerations, environmental risk assessment, worker health and safety, site characterization, environmental monitoring, cost engineering, underground storage tank projects, geotechnical and treatment design technologies, and lessons learned from project design and construction.

**Prerequisites.** This overview course is intended as an introductory course for technical and management personnel with a current or projected assignment in the USACE Environmental Restoration programs, or those from other DoD agencies involved in environmental restoration project execution. This course does not satisfy the health & safety training requirements under OSHA 29 CFR 1910.120/29 CFR 1926.65. (a) Target audience: project managers/engineers, chemical engineers, environmental engineers, cost engineers, geotechnical engineers, geologists, risk assessors, toxicologists, environmental scientists/technicians, environmental protection specialists, attorneys, regulatory specialists, chemists, industrial hygienists, health physicists,safety professionals, construction QA representatives, and/or other related technical/management disciplines. (b) Grade:GS-05 and above.

<u>Session</u>	<u>Location</u>	<u>Date</u>
2005-1	Omaha, NE	05/03/2005 05/05/2005

**ENV SAMPLING**

**225**                      **Length: 28 Hours**                      **33ESA01A**  
**CEUs: 2.5**                      **PDHs: 25**                      **Tuition: \$1,390.00**

**Purpose.** This course provides students the knowledge and skills necessary to plan and conduct sampling for site characterization and remediation monitoring at hazardous, toxic, and radioactive waste (HTRW) sites. In addition, the students will receive guidance on managing and determining usability of data generated by site characterization and monitoring activities.

**Description.** The course describes the chemistry and behavior of contaminants typically found at HTRW sites, project planning concepts including preparation of sampling and analysis plans, sampling of soil gas, field analytical techniques, geophysical techniques applicable to HTRW sites, soil sampling, surface water and sediment sampling, monitoring well installation, ground water sampling, pump/slug testing, air sampling, investigation-derived waste disposal, statistical analysis of data, sample packaging and shipping, evaluation of data usability and quality, use of geographic information systems, and QA oversight of contractors performing this type of work. The course is carefully coordinated with existing USACE and EPA guidance

and includes demonstrations of some of the sampling techniques.

**Prerequisites.** Nominees must be assigned to selected series 0800 (e.g., 0810 Civil Engineer or 0819 Environmental Engineer), 1300 (e.g., 1350 Geologist or 1320 Chemist), 0690, 0698, 0028, or be working as a project manager for HTRW projects and be in grade GS-5 or above. Students should have a current or projected assignment related to HTRW projects.

Session	Location	Date
2005-1	Omaha, NE	05/17/2005 05/20/2005



**ENVIRON INTERFACE**

**770**                      **Length: 8 Hours**                      **33EVI01A**  
**Tuition: \$225.00**

**Purpose.** This course trains personnel responsible for planning, programming, and/or implementing installation environmental programs, or providing environmental services to military communities.

**Description.** Modules of instruction include (a) overview of the Army's environmental vision and strategy, (b) providing district environmental services, and (c) environmental responsibilities of the installation

**Prerequisites.** Nominees should be installation environmental office staff, ARCOM/MACOM environmental office staff, unique environmental staffs, district project managers, and DPW environmental coordinators.

**ENVIRONMENTAL IMPACT ASSESSMENT**

**169**                      **Length: 36 Hours**                      **33EIA01A**  
**LUs: 28**                      **Tuition: \$1,080.00**

**Purpose.** This course provides students with a working knowledge of the environmental impact assessment process and the information, including environmental studies, needed to prepare an environmental impact assessment document or an environmental impact statement.

**Description.** Detailed consideration of the factors to be considered in evaluating the effect of proposed actions upon various aspects of the environment. The data and information required for the environmental evaluation of a major federal action are examined and their sources discussed. Particular emphasis is placed on the physical and chemical factors which can control impacts on biological or cultural resources. The impact evaluation procedures to be followed in complying with the National Environmental Policy Act and with the Procedures and Guidelines for Water Resources Implementation Studies are outlined. Procedures are described and analyzed to assist the preparation and critique of an assessment. Points to be considered in legal challenges are discussed. Coordination and public involvement are addressed. In addition to providing

assessment procedures, this course serves as preparation in the physical resource environment for separate courses on ecological and cultural resources.

**Prerequisites.** Nominees must be assigned (a) Occupational Series: Selected 0020, 0100, 0400, 0800, and 1300 or by demonstration of special needs related to job responsibilities; (b) Grade: GS-05 or above.

Session	Location	Date
2005-1	Huntsville, AL	03/21/2005 03/25/2005
2005-2	DFW, TX	06/13/2005 06/17/2005

**ENVIRONMENTAL LAWS & REGULATIONS**

**170**                      **Length: 36 Hours**                      **33ELR01A**  
**LUs: 36**                      **Tuition: \$950.00**

**Purpose.** After completing the course, students will be able to (a) list major federal statutes designed to protect the environment\*; (b) summarize the major provisions of each federal environmental law and relationship to activities of the Corps of Engineers; (c) find the federal and state environmental statutes and regulations pertinent to a specific Corps activity, given access to a reference library; (d) identify and state legal requirements for environmental protection related to specified Corps activity, given access to suitable reference materials.

**Description.** This is a general survey course designed for non-attorneys or for attorneys with limited background in environmental law. Topics include federal laws and regulations for environmental protection; pollution standards and variances; congressional and judicial developments; economic and technical difficulties in meeting standards; relation of the Corps of Engineers to state and federal agencies in meeting standards and enforcing laws; methods of monitoring pollution; legal penalties; litigation techniques; the Rivers and Harbors Act of 1899 regulatory provisions; the National Environmental Policy Act (NEPA); Executive Order 11514; the NEPA regulations of the Council on Environmental Quality; the Federal Clean Water Act; the Federal Clean Air Act; the Resource Conservation and Recovery Act; the Toxic Substances Control Act; the Endangered Species Act; the Fish and Wildlife Coordination Act; the Historic Preservation Act; the Noise Control Act; the Federal Environmental Pesticide Control Act; the Coastal Zone Management Act; regulations of the Environmental Protection Agency; and state laws and regulations.

\*This course is not intended for personnel primarily involved with hazardous and toxic waste projects and does not include detailed coverage of the Resource Conservation and Recovery Act (RCRA), the Comprehensive, Environmental Response, Compensation and Liability Act of 1980 (CERCLA), or the Superfund Amendments and Reauthorization Act (SARA) of 1986.

THIS COURSE IS ISEERB (INTERSERVICE ENVIRONMENTAL EDUCATION REVIEW BOARD) APPROVED. It has been reviewed by subject matter

experts from DOD Components and found to be suitable to more than one agency.

**Prerequisites.** Nominees must be assigned (a) Occupational Series: Selected 0020, 0100, 0400, 0800, and 0900; (b) Grade: GS-07 or above. Nominees should have the abilities stated in the Environmental Impact Assessment course.

Session	Location	Date
2005-1	Huntsville, AL	03/14/2005 03/18/2005
2005-2	St. Louis, MO	04/25/2005 04/29/2005
2005-3	Atlanta, GA	05/16/2005 05/20/2005
2005-4	Seattle, WA	06/13/2005 06/17/2005
2005-5	Nashville, TN	07/25/2005 07/29/2005
2005-6	Virginia Beach, VA	08/15/2005 08/19/2005

**ENVIRONMENTAL WRITING**

**198**                      **Length: 22 Hours**                      **53EVW01A**  
**Tuition: \$1,530.00**

**Purpose.** This course provides instruction for those who prepare NEPA documents (EIS, EA, Supplements) as part of legislative proposals and feasibility studies to help them save time and develop good strategies for planning, organizing, writing, and revising.

**Description.** As a result of the classroom instruction and several workshops, students will be better prepared to (a) interpret regulations and procedures relating to NEPA; (b) use the multi-objective, multi-disciplinary planning framework for producing EAs and EISs; (c) organize material such as options and impacts in a logical manner; (d) design graphic displays; (e) show improvement in writing; (f) edit the writings of others; and (g) analyze Corps documents for correct content and readability.

**Prerequisites.** Nominees must be assigned (a) Occupational Series: Selected 0020, 0100, 0400, 0800, and 1300 or demonstrate special needs related to job responsibilities; (b) Grade: GS-07 or above.

Session	Location	Date
2005-1	Huntsville, AL	06/14/2005 06/16/2005

 **ERG COMPLIANCE**

**767**                      **Length: 16 Hours**                      **33ERG01A**  
**CEUs: 1.0**    **Tuition: \$225.00**

**Purpose.** This course trains personnel who may be asked to do environmental compliance assessments for their workplaces or for other areas relative to the U.S. Army Corps of Engineers civil works mission. These assessments will be conducted using the Environmental Review Guide for Operations (ERGO) manual.

**Description.** Training materials include a 1/2" videocassette, a Facilitator's Guide, and a Student Study Guide. Modules of instruction include (a) Environmental Compliance Requirements, (b) Preparing for the

Assessment, (c) Conducting Assessments, (d) Post-Assessment; and (e) Using ERGO as a Proactive Resource.

After completing the classroom portion of this course, a 1-day ERGO onsite assessment should be conducted. The onsite assessment, in conjunction with classroom participation, is mandatory to receive CEU credit.

**Prerequisites.** Nominees should be facility managers, park rangers, project managers, power plant supervisors, lockmasters, district logistic management officers, real estate personnel, or similar positions.

**EST FOR CONST MODS**

**180**                      **Length: 36 Hours**                      **41ECM01A**  
**CEUs: 3.4**    **PDHs: 34**    **LUs: 29**  
**Tuition: \$910.00**

**Purpose.** This course provides intermediate level instructions and ready-reference material to assist in improving the participant's ability to prepare a reasonable estimate for a construction contract modification within Corps of Engineers policies and procedures.

**Description.** Through lectures, conferences, course problems, and case study sessions, this course covers the various elements of a cost estimate (e.g., direct costs, indirect costs, profit, etc.) and the contract provisions and regulations relating to modification estimates. Also covered in the course are the estimating procedures for delays, suspensions, impact, acceleration and review and analysis of contractor cost proposal. The student will be required to complete a detailed cost estimate which will require work to be done after regular class hours. In addition, a mandatory precourse assignment must be completed by the student and brought to the class. A pretest and posttest will also be given.

**Prerequisites.** Nominees may be from (a) any civilian occupational series or military specialty; (b) Grade: GS-09 or above and comparable military with a current or projected involvement in the preparation, review, or use of construction cost estimates for contract modifications.

**Notes.** This is not a basic level estimating course. Nominees must have attended the Cost Estimating Basic course (No. 181) or have comparable training or work experience, otherwise a waiver must be processed/approved.

This course contains requirements which are mandatory for course completion and may require an estimated 5 hours of overtime. It is your responsibility to bring this to the attention of your supervisor so that an overtime request/determination can be made by your appropriate personnel. It is also your responsibility to certify the amount of time expended on these requirements to your supervisor when you request overtime compensation.

Session	Location	Date
2005-1	Phoenix, AZ	11/15/2004 11/19/2004
2005-2	Tampa, FL	02/07/2005 02/11/2005
2005-3	Huntsville, AL	04/18/2005 04/22/2005

 **ETHICS TRAINING-WBT**

**802**                      **Length: 1 Hour**                      **Tuition: N/C**

**Purpose.** In accordance with DoD 5500.7-R, Joint Ethics Regulation (JER), the purpose of this course is to serve as an initial ethics orientation of new employees, refresher training for current employees, or annual ethics training as mandated by the employees' local Office of Counsel.

**Description.** This course provides an overview of the basic rules that guide ethical behavior. Included are those rules addressing conflicts of interest, gifts, travel, outside activities, post employment issues, and misuse of position. Situational vignettes are presented to test the reader's understanding of each major topic. Reference documentation providing the basis for the most common ethics rules will be briefly discussed. If you want to know more, you can see many of the laws, orders, and regulations that serve as the source of the rules discussed here by visiting the sites referenced in this course.

**FIELD SAFETY**

**236**                      **Length: 24 Hours**                      **55COS01A**  
**Tuition: \$1,100.00**

**Purpose.** This course is designed for Corps of Engineers supervisors and/or managers who have responsibility for overseeing contract or in-house construction and operational activities. This 3-day course will provide managers and supervisors with current state-of-art safety technology and methodology as it relates to field work such as earth moving, roofing, mechanical installation, scaffolding and ladders, administrative safety requirements, etc. Through open discussions and group participation, this course will bring together OSHA, Corps of Engineers, and consensus safety standards that apply to typical Corps activities and heighten safety awareness of field managers and supervisors.

**Description.** The basic references for this course are the Corps of Engineers' Safety and Health Requirements Manual, EM 385-1-1, and pertinent OSHA standards. This 3-day course will provide, through various formats, that information considered necessary and essential for area, resident, and project engineers, operations managers and/or supervisors in the discharging of their day-to-day safety and health responsibilities. This course also has direct application for other Corps of Engineers field personnel in related career fields, e.g., supervisory rangers, drill crew foremen, lockmasters, hired labor supervisors, survey crew leaders, etc. Some of the specific topics covered in this course will include: (a) overview of EM 385-1-1; (b)

legal aspects of employee safety for supervisors; (c) administrative safety and health requirements; (d) review of contractor safety submittals; (e) OSHA and the Corps of Engineers; (f) preparation of Accident Prevention Plans; (g) medical surveillance plans; (h) workers compensation program/alternatives; (i) personnel protective equipment; (j) specific safety standards for field work; (k) accident investigation and reporting; (l) confined space requirements; and (m) industrial hygiene programs.

**Prerequisites.** Nominees must be assigned (a) at the operating level in Corps of Engineers construction and/or operational activities; (b) Grade GS-09 or above; and (c) current or projected assignment as manager, supervisor, foreman, team leader or equivalent.

Session	Location	Date
2005-1	Atlanta, GA	05/16/2005 05/20/2005
2005-2	Sacramento, CA	07/25/2005 07/29/2005
2005-3	DFW, TX	08/15/2005 08/19/2005

**FINANCE AND ACCOUNTING**

**12**                      **Length: 35 Hours**                      **42FAE01A**  
**Tuition: \$1,150.00**

**Purpose.** To enhance the attendee's knowledge and understanding of finance and accounting policy, application of that policy, and managerial accounting principles in the USACE environment.

**Description.** Accounting principles, standards, and concepts are presented in relation to USACE missions and functions. Emphasis is placed on accounting policies and procedures, and the accountant's role in development of auditable financial statements.

**Prerequisites.** For FY05, nominees must be professional accountants assigned in Occupational Series 0510 (GS-09 or above) with a minimum of one year experience at that grade level.

Session	Location	Date
2005-1	San Antonio, TX	11/01/2004 11/05/2004
2005-2	Savannah, GA	02/07/2005 02/11/2005
2005-3	Seattle, WA	04/25/2005 04/29/2005

 **FINANCIAL MANAGERS-WBT**

**801**                      **Length: 4 Hours**                      **Tuition: \$70.00**

**Purpose.** This course is designed to provide managers and supervisors an overview of the laws, regulations, and rules of financial responsibility. It discusses the financial requirements for time and attendance, travel orders, labor, or purchasing goods and services.

**Description.** The Certifying time and attendance module discusses the functional objectives of time and attendance and the related manager responsibilities; the Approving Travel Orders module is designed to

assist managers and supervisors in achieving good travel management and covers a wide range of conditions and guidelines that can be used for directing travel or approving travel orders and vouchers; the Manage Rates and the Cost of Doing Business module is designed to assist managers in making decisions that are useful in controlling the cost of doing business; and the Approving Micro Purchases module is designed to assist USACE managers in making decision regarding approval of micro purchases; this module will describe the options available and limitation that managers should understand when approving micro purchases.

**Prerequisites.** All managers and supervisors responsible for time and attendance, travel orders, labor, or purchasing goods and services.

<u>Session</u>	<u>Location</u>	<u>Date</u>
2005-1	Web-based	10/01/2004 09/30/2005

### FIRE EXTINGUISHING SYSTEMS DESIGN

**33**                      **Length: 36 Hours**                      **55FES01A**  
**Tuition: \$1,940.00**

**Purpose.** This course teaches the basic knowledge and skills necessary for the design, calculation, and review of automatic fire extinguishing systems. The Corps of Engineers requires personnel involved in fire extinguishing system design to be familiar with all required fire extinguishing systems.

**Description.** The course covers fixed fire protection systems and design of fire extinguishing systems. After completing this course, the student should be able to design/review most types of automatic fire extinguishing systems. The course will emphasize fire sprinkler design.

**Prerequisites.** Nominees must meet the following criteria: (a) Occupational Series: Selected 0800, (b) Grade: GS-07 or above; (c) students must be involved in design/construction of fire extinguishing systems as part of their duties or require this knowledge in their work.

<u>Session</u>	<u>Location</u>	<u>Date</u>
2005-1	Huntsville, AL	07/11/2005 07/15/2005

### FIRE PROTECTION ENGINEERING (BASIC)

**6**                              **Length: 36 Hours**                              **55FPE01A**  
**LUUs: 34**                              **Tuition: \$1,260.00**

**Purpose.** This course teaches architects and engineers the necessary skills and knowledge required to implement the fundamental considerations of fire protection in building design and construction. After completing the course, the student should be able to review basic fire protection analyses and drawings more efficiently.

**Description.** The course covers basic fire protection for facilities. The course includes instruction on fire-rated construction, building and life safety codes, exit requirements, special hazard protection, and general requirements of fire extinguishing systems, fire alarm and detection systems, and water supplies.

**Prerequisites.** Nominees must meet the following criteria: (a) Occupational Series: Selected 0800, (b) Grade: GS-07 or above, (c) students should have a current or projected assignment in a safety office, in an engineer design section, in an construction office, or as a project manager with duties which require a technical knowledge of fire protection engineering principles.

<u>Session</u>	<u>Location</u>	<u>Date</u>
2005-1	Huntsville, AL	05/16/2005 05/20/2005
2005-2	Virginia Beach, VA	07/18/2005 07/22/2005

### FLEXIBLE PAVEMENT CONSTRUCTION—QV

**50**                              **Length: 36 Hours**                              **35FPC01A**  
**CEUs: 2.9**                              **PDHs: 29**                              **Tuition: \$1,590.00**

**Purpose.** This course is designed to identify and discuss the requirements for verifying the production and placement of flexible pavements.

**Description.** The course covers current Corps of Engineers techniques for quality assurance of all types of flexible pavements, including (a) subgrade, subbase, and base courses; (b) primes, tacks, and seal coats; (c) surface treatment and slurry seals; and (d) plant mixed bituminous paving mixtures. In addition, it covers necessary field tests, interpretation of results, and verification required to assure the production of quality flexible pavements on construction projects. Instruction includes classroom lectures and laboratory demonstrations.

**Prerequisites.** Nominees must be assigned (a) Occupational Series: Selected 0800, 0801, 0802, 0809, 0810, 0830, and 0850; (b) Grade: GS-05 or above. Students should have a current or projected assignment as a general or asphalt construction quality assurance representative or have related duties at the field level. This course is also well-suited for junior engineers as part of the training provided in Engineer-In-Training programs and for Corps division, district, and field office personnel directly concerned with construction operations. The attendee must not have attended this course or a similar course within the past 5 years.

**Notes.** This course is also valuable to personnel in other series such as 1102 to see how pavements are designed, tested and constructed.

<u>Session</u>	<u>Location</u>	<u>Date</u>
2005-1	Vicksburg, MS	10/25/2004 10/29/2004

 **FLOATING PLANT SAFETY**

**778**                      **Length: 16 Hours**  
**CEUs: 1.5**                      **Tuition: \$225.00**

**Purpose.** This course is intended to educate with focus on concepts rather than execution. It provides the student with a basic understanding of floating plant/dredging safety, as well as various types of equipment used in conjunction with floating plant and dredges.

**Description.** This course consist of the following modules of instruction, roles and responsibilities, dredging equipment, lifting equipment and rigging, personnel considerations, training and personal protective equipment, fall protection, environmental conditions/considerations, diving operations, fire prevention and protection, and hazardous energy.

**Prerequisites.** Nominees for this course should include personnel that are assigned to organizational elements that have responsibility for purchasing maintaining, inspecting and operating floating plant and dredging equipment and/or operations.

**FLOATING PLANT SAFETY**

**81**                      **Length: 28 Hours**                      **58FPD01A**  
**Tuition: \$1,150.00**

**Purpose.** This course provides personnel with current safety and health information with which they will be able to perform required safety and health inspections of Corps of Engineers and contractor owned floating plant and dredging equipment and/or operations. The intent of this training is to familiarize students with pertinent safety and health requirements, including the Corps of Engineers Safety and Health Requirements Manual (EM 385-1-1), US Coast Guard requirements, applicable Codes of Federal Regulations, and other industry standards pertaining to floating plant and dredging equipment and operations.

**Description.** This course is designed for Corps of Engineers personnel that are assigned to organizational elements that have responsibility for purchasing, maintaining, inspecting, and operating floating plant and dredging equipment and/or operations. Some of the specific areas to be covered in this course, through open discussion, lecture, video tapes, on-site visit, and practical exercises, include the following topics: (a) overview of applicable safety standards; (b) types of floating plant/dredges; (c) in-depth review of Section 19 of EM 385-1-1; (d) reviewing contractor safety submittals; (e) contractual safety requirements and/or specifications; (f) electrical safety on floating plant; (g) fire prevention and required on-board equipment; (h) rigging and hoisting equipment; (i) confined space requirements; (j) Corps diving standards; (k) how to perform safety inspections and record findings; (l) on-board inspection of dredge (practical exercise); (m)

accident investigation and reporting; and (n) contingency/emergency operations.

**Prerequisites.** Nominees should include dredging inspectors, quality assurance representatives, project and resident engineers, safety specialists, managers, and/or engineers, and personnel in other career fields that have an interest in floating plant and dredging safety. Students should have completed the PROSPECT "Dredging Fundamentals" course" (#333) or have a solid understanding of floating plant and dredging equipment and/or operations. Students should bring clothing appropriate for a field trip aboard an operating dredge, normally located on open water. Safety and/or tennis shoes are acceptable for secure footing on open deck areas. The Corps will provide PFD's, hard hats, and hearing protection. A picture ID is required. The use of cellular telephones, pagers, laptop computers, or other devices which may cause disruption with the instructors' presentations during the classroom sessions will not be allowed. Use of these items for other than subject matter instruction will be grounds for immediate dismissal.

**Notes.** This course contains a requirement of a field trip to an operating dredge. The field trip may run past the 8 hour training day. It is estimated that 4 hours of overtime may be required for this field trip.

Session	Location	Date
2005-1	Virginia Beach, VA	11/16/2004 11/19/2004

**FLOOD CONTROL & COASTAL EMER**

**158**                      **Length: 36 Hours**  
**Tuition: \$600.00**

**Purpose.** This course provides a comprehensive overview of the U.S. Army Corps of Engineers (USACE) Civil Emergency Management Program. The course includes studies of the policy and guidance associated with the USACE Flood Control and Coastal Emergency authority (PL 84-99).

**Description.** Through lectures, case studies, discussions and exercises, the student receives training in the following areas: USACE emergency responsibilities involving all-hazard natural disaster preparedness, advance measures; emergency operations (flood and post flood response); rehabilitation of flood control works threatened or destroyed by flood; protection or repair of Federally authorized shore protection works threatened or damaged by coastal storm; and provision of emergency water supplies needed as a result of drought or contaminated sources.

**Prerequisites.** District and MSC emergency managers must approve nominations. In general, nominees should be: (a) emergency management personnel; (b) functional or technical staff who are currently assigned to/or working in positions with responsibilities related to emergency management, flood control works inspections and maintenance, and emergency response opera-

tions. Attendance by other personnel will be determined based on space available in the course. All emergency management personnel should have this course within the first two years of their assignment to the emergency management organization and every three years thereafter as a refresher. Chief, HQUSACE Civil Emergency Management Branch will have final approval authority over all nominations, based on the recommendation(s) of local and MSC emergency managers. As many skills and competencies are involved in planning and conducting emergency operations, there is no specific job series requirement to attend this course.

Session	Location	Date
2005-1	Eastern Region	11/15/2004 11/18/2004
2005-2	Central Region	05/23/2005 05/26/2005

### FLOOD CONTROL CHANNEL DESIGN

**396** Length: 36 Hours 35FCC01A  
**CEUs: 3.2** PDHs: 32

**Purpose.** This course trains civil and hydraulic engineers and selected senior technicians to use the latest Corps of Engineers guidelines and criteria for designing flood control channels.

**Description.** The course primarily includes instruction and workshop problems on designing flood control channels and channel restoration projects in natural (soft) materials. The course covers design guidance contained in EM 1110-2-1601, "Hydraulic Design of Flood Control Channels" and EM 1110-2-1418, "Channel Stability Analysis of Flood Control Projects." The course also includes the latest design technology and tools on channel design developed under the Flood Damage Reduction Research Program and some instruction on the design of channels for rapid flow conditions. Major topics include (a) review of open-channel hydraulics; (b) review of movable-boundary flood control channels, including fundamentals of fluvial geomorphology and sediment transport; (c) sediment transport equations, sediment impact analysis and sediment budget calculations; (d) methods for designing the geometric shape, width, depth, slope, and roughness of a channel for optimum flood control effectiveness and stability; (e) hands-on workshops using the computer program known as "SAM" for analysis and design of flood control channels; and (f) miscellaneous topics such as rapid flow design considerations, field data requirements, environmental considerations, local inflows and side drainage, and sediment detention structures, and freeboard computations.

**Prerequisites.** Nominees must be hydraulic engineers or senior technicians with current or planned involvement in the planning or design of flood damage reduction and/or channel restoration projects. Nominees must be assigned (a) Occupational Series: Selected 0800; (b) Grade: GS-07 or above.

### FLOOD DAMAGE ANALYSIS TOOLS W/GIS

**316** Length: 36 Hours 35FDA01A

**Purpose.** This course provides Corps of Engineers hydraulic engineers, economists, study managers, and other water resources professionals with detailed instructions for using the comprehensive set of HEC and IWR analytical tools for performing flood damage reduction studies using Geographic Information Systems (GIS). Participants will gain hands-on experience in the use of the tools by applying them in workshops. Included in the course are: the Flood Damage Analysis (HEC-FDA), Flood Impact Analysis (HEC-FIA), GeoFDA, and IWR-FIAT (with Marshall-Swift options) programs. The course emphasizes the GIS approach for structural inventories and subsequent formulation and evaluation of flood damage reduction plans. The computations and procedures presented are consistent with requirements of ER 1105-2-100, "Planning Guidance Notebook," and EC 1105-2-205, "Risk-based Analysis for Evaluation of Hydrology/Hydraulics and Economics in Flood Damage Reduction Studies."

**Description.** The presentations and workshop applications associated with the suite of integrated software will feature the use of GIS approaches to aid the analysis and output display of results. Alternative methods for structure inventories will include: grid-cell land use; census block data; spatially referenced business databases; parcels, and field surveys including use of GPS. Analysis examples will demonstrate the use of GeoHMS and GeoRAS for integration of hydrologic and hydraulic data into the flood damage analysis framework. Interactive GIS flood damage calculations for single or user defined groups of structures will be illustrated. Output will be tabular, graphical, and spatial depictions. Plans may also be spatially displayed and compared.

**Prerequisites.** Nominees should be assigned (a) Occupational Series: Selected 0000-0100, 0800, and 1300; (b) Grade: GS-07 or above. Nominees for the course should be primarily working level professionals; however, supervisory personnel in planning sections or economic analysis sections would benefit significantly by being exposed to modern computational methods.

### FLOOD FREQUENCY ANALYSIS

**123** Length: 36 Hours 35FFA01A

**Purpose.** This course provides a basic understanding for the correct application of the Interagency Committee on Water Data guidelines on computation of flood flow frequencies. The Flood Flow Frequency Analysis Computer Program is used throughout the course.

**Description.** This course enables the participant to make technically sound and efficient discharge-frequency estimates. The course focuses on the theoretical basis for frequency analysis, application of techniques contained in the "Guidelines for Determining

Flood Flow Frequency," Bulletin 17B, and application of the computer program Flood Frequency Analysis (HEC-FFA). The course is intended for engineers, hydrologists, and others involved in developing discharge-frequency estimates at gaged locations.

**Prerequisites.** Nominees must be assigned (a) Occupational Series: Selected 0800, 1300, and 1500; (b) Grade: GS-07 or above. Course nominees should be engineers who perform professional work in the fields of hydrology and hydraulics. Nominees should have one or more years of experience in these areas. It is required that course participants be in positions where, in the next year or two, they will be involved in developing frequency curves, performing regional analysis, or determining generalized skew coefficients.

**FLOOD WARNING PREPAREDNESS PROGRAM**

**345**                      **Length: 36 Hours**                      **35FWP01A**

**Purpose.** This course provides participants with an understanding of Flood Warning/Preparedness Programs and the technical requirements for planning, designing, and implementing these systems. The course emphasizes the roles and responsibilities of local, state, and federal agencies and includes presentation of several case examples.

**Description.** Flood Warning/Emergency Preparedness Programs are an important response to flood threat. The programs often are an integrated federal/state/local set of activities tailored to a specific local community situation. The Corps can have a significant role in this area. The course offers opportunities to professional staff in flood plain management, hydraulics and hydrology, emergency operations, and civil works planning studies to become knowledgeable in this area. Through lectures and workshops, students explore topics on (a) flood warning/preparedness programs overview; (b) roles of the National Weather Service, the Federal Emergency Management Agency, and others; (c) flood threat recognition systems; (d) data collection and management; (e) warning dissemination and emergency response; (f) Corps emergency operations; (g) plan formulation and evaluation; (h) FPMS Program and flood preparedness; (i) implementation of flood preparedness programs; (j) private sector activities; and (k) many case examples.

**Prerequisites.** Nominees must be assigned (a) Occupational Series: Selected 0000-0100, 0800, and 1300; (b) Grade: GS-7 or above; (c) a current or projected assignment in formulating/evaluating Flood Warning/Preparedness Programs.

**FUNDAMENTALS OF WETLANDS ECOLOGY**

**272**                      **Length: 36 Hours**                      **33WET01A**  
**CEUs: 2.3**                      **PDHs: 23**                      **Tuition: \$2,640.00**

**Purpose.** The restoration of fish and wildlife habitat and other wetland functions is a high priority project purpose in the civil works program. Wetlands typically comprise a major portion of the fish and wildlife habitat restoration projects currently being planned by Corps districts. However, additional wetland functions such as improvement of water quality are becoming increasingly recognized for their importance in many Corps' programs. Corps personnel who have no, or only limited, experience or education with wetland ecosystems need to know the fundamental concepts of wetlands science and management. This course provides an introduction and overview of basic wetland ecological concepts and principles in the context of planning and operating civil works environmental and mitigation projects.

**Description.** Students are provided with state-of-the-art basic knowledge of wetland flora and fauna, hydrology, soils, and ecology. The course emphasizes wetlands functions and values in an ecosystem perspective. Both saltwater and freshwater wetlands will be addressed in the course. The relationship of wetlands to adjacent terrestrial and deep water habitats, along with wetlands succession and dynamics, are discussed. This course provides the base working level fundamentals in the wetlands ecology area and may also serve to update students in current developments in wetlands science. While the focus of this course is not on wetlands delineation or regulatory (Section 404) issues, regulatory personnel would benefit from the broader overview of wetlands ecology.

This course provides instruction in the following topics: (a) wetland hydrology; (b) wetland vegetation; (c) major faunal populations associated with wetlands; (d) wetland plant and animal communities, ecosystem relationships, and dynamic processes; (e) hydric soils; (f) wetland classification systems, including the relationship of such wetland classifications to ecosystems classifications and parameters; (g) principles of wetlands ecology and dynamics; (h) current research in wetlands; (i) evaluation of wetland functions; (j) overview of wetland development, restoration, and constructed wetlands; and (k) open discussion and problem solving.

**Prerequisites.** Nominees must be: Occupational Series: 0025, 0028, 0110, 0400, 0800, 1300; and Grade: GS-07 and above.

<u>Session</u>	<u>Location</u>	<u>Date</u>
2005-1	Olympia, WA	08/01/2005 08/05/2005

**FUNDAMENTALS OF GROUTING**

**217**                      **Length: 40 Hours**                      **35FGR01A**  
**Tuition: \$2,740.00**

**Purpose.** This course provides engineers, geologists, and field inspection personnel with the latest CE and industry methodology to plan, implement, and evaluate grouting projects; to enhance understanding of methods, mechanics, and products available; and to evaluate requirements and adequacies of various aspects of these fields.

**Description.** Topics include (a) basic geotechnical concepts, (b) geologic site investigation for grouting, (c) principles of cement grouting in rock, (d) cement grouting equipment, (e) techniques in cement grouting, (f) compaction grouting and leveling of structures, (g) chemical grouting and site improvement, and (h) micro-fine cement and grouting.

**Prerequisites.** Nominees must be assigned Occupational Series: selected 0800 and 1350 and engineering technicians assigned to major construction projects.

NOTE: This course is taught by the University of Florida. Location and dates will be selected by the University of Florida.

<u>Session</u>	<u>Location</u>	<u>Date</u>
2005-1	TBD	

**GENERAL CONSTRUCTION-QV**

**54**                      **Length: 37 Hours**                      **35GCQ01A**  
**CEUs: 3.3**                      **PDHs: 33**                      **LUs: 33**  
**Tuition: \$990.00**

**Purpose.** This course provides the participant with the basic technical knowledge required to verify all elements of building construction, based on guide specifications, and to identify the quality assurance representative's role as it relates to construction quality management.

**Description.** Through lectures, conferences, and case study sessions, the course covers the subjects of concrete and masonry, safety, exterior and interior electrical systems and components, heating, air-conditioning, plumbing, ventilation, interior and exterior finishes, structural steel and welding, mechanical insulation, sheet metal work, site utilities, soils and compaction, and roofing. An account of the purpose, meaning, and acceptance of contract quality control is included in the session on procedures for monitoring the construction quality management program. The course is directed toward proper and effective quality assurance verification of building construction.

**Prerequisites.** Nominees must be assigned (a) Occupational Series: 0801, 0802, 0808, 0809, 0810, 0830, and 0850; (b) Grade: GS-05 or above. Students

should have a current or projected assignment as a general quality assurance representative, construction representative, technician, or engineer, with quality assurance responsibilities. The fact that this course is oriented to building construction should be weighed when nominating a civil works candidate. Candidates must not have attended this or similar course within the past 5 years.

**Notes.** This course contains requirements which are mandatory for course completion and may require an estimated 1 hour of overtime. It is your responsibility to bring this to the attention of your supervisor so that an overtime request can be made by your appropriate personnel. It is also your responsibility to certify the amount of time expended on these requirements to your supervisor when you request overtime compensation.

<u>Session</u>	<u>Location</u>	<u>Date</u>
2005-1	Virginia Beach, VA	10/25/2004 10/29/2004
2005-2	San Diego, CA	02/28/2005 03/04/2005

**GEOTECHNICAL PROBABILITY**

**279**                      **Length: 36 Hours**                      **35PRG01A**

**Purpose.** Corps of Engineer policy stipulates that reliability analysis will be used in planning, major rehabilitation, and dam safety projects. This course trains civil engineers who have responsibilities in geotechnical, HTRW, or structure design fields in the area of reliability analysis.

**Description.** Through a series of lectures and practical exercises, students will study element of probability, distribution models, reliability analysis, and parameter estimates. Finally, the students will be taught step by step the detail procedure he needed in reliability analysis applied to seepage, and slope stability analysis.

**Prerequisites.** (a) Occupational series: 0810, Civil Engineer; (b) Grade: GS-07 and above; and (c) This course is meant primarily for those civil engineers with geotechnical, HTRW, or structure design responsibilities.

**GIS INTERMEDIATE**

**167**                      **Length: 24 Hours**                      **54GII01A**  
**Tuition: \$1,900.00**

**Purpose.** This course provides students who already have basic GIS knowledge with more advanced GIS concepts and issues. The class uses a single data set to reinforce class instruction during a series of hands-on laboratory exercises.

**Description.** This instruction is designed to provide knowledge of the use of advanced GIS concepts. Specific issues addressed: (a) Data Base Design. What are the best ways to create databases to solve specific problems, avoiding the need to redesign later to rectify deficiencies; (b) Advanced Analytical Methods. Pro-

cessing methods beyond basic boolean overlay and map algebra will be considered for environmental, water control, and land management applications; and (c) Error. Error types, calculation, and issues related to propagation of error during analysis will be considered. (d) Presentation of Results. Key elements of cartographic presentation are discussed in the context of the preparation of effective GIS maps.

**Prerequisites.** Students shall have previous instruction or job-related experience in the use of GIS. Nominees should be assigned (a) Occupational Series: 0020-0029, 0100-0199, 0400-0499, 0800-0899, 1170, and 1300-1399; (b) Grade: GS-07 or above.

Session	Location	Date	
2005-1	Hanover, NH	05/24/2005	05/26/2005
2005-2	Hanover, NH	06/14/2005	06/16/2005

### GIS INTRODUCTION

**205** Length: 36 Hours 54GIS01A  
**CEUs: 2.2** Tuition: \$1,500.00

**Purpose.** This course provides introductory instruction on the use of GIS software/hardware and various data sources to analyze Corps project operations and support decision making.

**Description.** Instruction is designed to introduce students to the concept of GIS as an integrator of geospatial data and analysis tool emphasizing emergency management, natural resource and environmental applications. Topics include (a) concept and operation of GIS, data entry, storage, display, output; (b) geospatial data structures and advantages of different data structures; (c) compatibility issues; (d) analysis, modeling, QA/QC; (e) how to select a GIS; and (f) related USACE and Federal policies and standards.

**Prerequisites.** Nominees should be assigned (a) as engineers, planners, biologists, foresters, or surveyors who use digital data to map or analyze projects; (b) Occupational Series: 0020-0029, 0100-0199, 0400-0499, 0800-0899, 1170, and 1300-1399; (c) Grade: GS-07 or above; (d) those whose job responsibilities include the analysis of spatial data and the use of digital data to map or manage Corps projects will find this course useful.

Session	Location	Date	
2005-1	Hanover, NH	04/04/2005	04/08/2005
2005-2	Hanover, NH	04/18/2005	04/22/2005
2005-3	Hanover, NH	05/02/2005	05/06/2005
2005-4	Hanover, NH	05/16/2005	05/20/2005

### GPS FOR GIS APPLICATIONS

**187** Length: 36 Hours 35GOV01A  
**CEUs: 2.8** PDHs: 28 Tuition: \$1,330.00

**Purpose.** This course provides participants with a knowledge of the basic techniques for integrating field

GPS spatial data into GIS databases. Functional elements supported by this course include: surveying, engineering, construction, navigation, master planning, and facility management.

**Description.** This course covers basic GPS/GIS concepts using the Spatial Data Standards principles and applications; related cost factors; GIS database development; absolute and differential modes; survey applications and procedures; and GPS data collection, reduction, accuracy, and analysis using commercial data bases and GIS software.

**Prerequisites.** The course is intended for military and civil functional elements involved with facility management, surveying, construction, navigation, mapping, real estate, FM, GIS, etc. Hands-on computer experience required for this course. The course is intended for both professional and technical level classifications. It is open to all grades/series with GPS/GIS responsibilities.

**Notes.** \*For a more in-depth GPS Survey Course, see Survey IV: GPS #203. For a more in-depth GIS course, see GIS Introduction #205.

Session	Location	Date	
2005-1	Vicksburg, MS	03/14/2005	03/18/2005
2005-2	Vicksburg, MS	09/19/2005	09/23/2005

### GROUNDWATER HYDROLOGY

**124** Length: 36 Hours 35GWH01A  
**Tuition: \$2,380.00**

**Purpose.** This course provides concepts, procedures, and techniques employed in the analysis, investigation, and management of groundwater hydrology problems.

**Description.** The course focuses on applied groundwater hydrology for the purpose of planning and evaluation. Topics include the occurrence and movement of groundwater, well hydraulics, site characterization surface and groundwater interaction (and groundwater modeling). Hand methods and computer techniques are presented as methods of analysis.

**Prerequisites.** Nominees must be assigned (a) Occupational Series: Selected 0810 and 1300; (b) Grade: GS-07 or above. A basic level of understanding is required in hydrology, hydraulics, and geology. One or more years of professional work experience in hydraulics, hydrology, geology/foundations, or water resources planning meets this basic level of understanding. In addition, course participants must be in positions or anticipate being in positions where they will be involved in groundwater studies within the next year or two.

Session	Location	Date	
2005-1	Davis, CA	02/28/2005	03/04/2005

**GROUNDWATER MODELING**

**108**                      **Length: 36 Hours**                      **54GRM01A**

**Purpose.** This course provides the student with an understanding in the conceptualization, construction, and application of computer models in the simulation of groundwater flow. This course serves as an introduction for Corps personnel interested in hands-on applications. Additionally, project managers are provided with an enhanced understanding of the development, application, and limitations of computer models of groundwater flow.

**Description.** Computer models of groundwater flow are applied to a variety of projects within the Corps of Engineers. This includes HTRW clean-up, water resource management, channel design, salt-water intrusion, interaction between surface water and groundwater, reservoir design and operation, and watershed management. The course focuses on the development and application of computer models for the purpose of planning, design, operation, and evaluation. Topics include: site characterization and conceptual model development, integration of data into a computer model, selection of boundary conditions, model calibration, model application, common errors in computer modeling, and limitations of computer modeling. The industry-standard U.S. Geological Survey finite-difference three-dimensional groundwater flow model MODFLOW will be introduced to course participants through lectures and computer workshops. A companion particle-tracking computer program MODPATH will also be introduced. Workshops will give students an understanding of MODFLOW file structure, application experience, and output analysis. The Department of Defense Groundwater Modeling System will be introduced as a preprocessor for more complex applications. Participants will be provided with a course binder, documentation for MODFLOW, and a set of example problems and solutions for use of MODFLOW. Additionally, all Department of Defense (including Corps of Engineers) employees will be provided with documentation and downloading instructions for the Groundwater Modeling System (GMS).

**Prerequisites.** Nominees must be (a) assigned to Occupational Series 0400, 0800, or 1300 series personnel; and (b) Grade GS-07 or above. A basic level of understanding of hydrogeology is required. Completion of the PROSPECT course entitled "Groundwater Hydrology" meets this requirement. In addition, course participants must be in positions, or anticipate being in positions where they will be involved in groundwater related studies within the next year or two.

**H&H DATA MANAGEMENT  
W/HEC-DSSVUE**

**152**                      **Length: 36 Hours**                      **54MDH01A**  
**Tuition: \$2,360.00**

**Purpose.** This course provides Corps of Engineers' water resource professionals with detailed instruction on available computer software to develop, manage, analyze, and display engineering data in the HEC Data Storage System (HEC-DSS) and the new HEC-DSSVue program. The procedures and programs provide a convenient system to support a variety of applications including hydrologic, water quality, and flood damage analysis. The system is designed for handling both historical and real-time data.

**Description.** Data management tools, provide a systematic means for organizing, storing, retrieving, manipulating, and sorting data for simulation and plan evaluation models. The HEC data storage systems allow for a convenient, orderly exchange of data among many application and analysis programs. This course focuses on the Data Storage System and the DSSVue graphical user interface. Applications with HEC programs to create data files, to manage and manipulate those data, to provide statistical analysis, and to develop graphical and tabular displays are included. Applications will be demonstrated with workshops and case studies. Major topics covered are (a) use of the HEC Data Storage System; (b) HEC-DSSVue graphical displays; (c) presenting data in a report form; (d) data entry; (e) statistical analysis and mathematical operations of data; (f) hydrologic applications; and g) user-developed scripts for data presentation.

**Prerequisites.** Nominees should be assigned (a) Occupational Series: 0400, 0800, and 1300; (b) Grade: GS-07 or above. Nominees should be familiar with Windows.

<u>Session</u>	<u>Location</u>	<u>Date</u>
2005-1	Davis, CA	09/12/2005 09/16/2005

**H&H FOR DAM SAFETY STUDIES**

**320**                      **Length: 36 Hours**  
**Tuition: \$2,690.00**

**Purpose.** Computation of inflows to a reservoir and flows through the dam and downstream are critical to assessing the safety of the dam and potential flood problems downstream. Current training available to hydrologic and hydraulic engineers deals with development of historical and design storms for flood and conservation storage and day-to-day operational events. This course provides needed guidance in the evaluation of extreme events related to dam safety. With the aging infrastructure of Corps dams, the need for analysis tools and engineers trained to properly use the tools is expanding.

**Description.** Through a series of lectures and hands-on workshops, the students will learn about the development of extreme storm events and hydrologic and hydraulic analysis methods using HEC-HMS and HEC-RAS software to simulate inflow design floods to assess spillway adequacy, and to evaluate dam-break consequences. Other topics will include severe storm magnitude and sequence analysis, hydrologic simulation of inflow to dam and in downstream tributaries, spillway sizing and operation, hydraulic calculations of flow through dam outlets, including breaches, and hydraulics of downstream flows.

**Prerequisites.** Nominees must be assigned (a) Occupational series: Selected 0800 and 1300; (b) Grade: GS-07 and above; (c) Prior courses: Basic HEC-HMS (#178) and HEC-RAS (#114) or equivalent knowledge; and (d) Familiarity working in a Windows-based computer system environment.

Session	Location	Date
2005-1	Davis, CA	08/01/2005 08/05/2005

 **HAP EXP**

**773**                      **Length: 12 Hours**                      **49HAP01A**  
**Tuition: \$100.00**

**Purpose.** Goal. This course provides real estate personnel with specific training on the basic requirements to be followed when establishing and administering the Department of Defense Homeowners Assistance Program (HAP).

The purpose of this course is to provide specific training to division and district staff with military real estate responsibilities regarding rules and procedures governing the HAP program.

**Description.** The training materials include one 1/2" videocassette, a Facilitator's Guide, and a Student Study Guide. Major topics covered in this course are: (a) Economic Impact of an Installation; (b) Eligibility of Applicants; (c) Application Processing Procedures; (d) Benefits of Private Sale, Government Purchase, or Foreclosure; (e) Acquisition and Closing Procedures; (f) Appeals Process; and (g) Income Tax Consequences.

**Prerequisites.** The student should have a general knowledge of real estate functions and be assigned to or expected to be assigned to a position that requires an understanding of the DOD HAP. These personnel are normally in Occupational Series: 0905, 1101, 1170, or 1171.

 **HAZWOPER 8HR REF**

**793**                      **Length: 8 Hours**                      **Tuition: \$125.00**

**Purpose.** This course is for United States Army Corps of Engineers' employees responsible for remediating the clean-up of Superfund, former defense, and military

installation hazardous waste sites as well as, respond to emergencies involving the release of hazardous materials. They are required by law (29 CFR 1910.120) to attend an 8-hour annual refresher training on Hazardous Waste Operations and Emergency Response (HAZWOPER) course to continue employment at treatment, storage, and disposal facilities (TDSs) and at hazardous waste clean-up sites.

**Description.** The HAZWOPER refresher training course includes an overview of changes and updates to federal regulations, toxicology, and hazard communication. It also covers updates and changes in hazardous waste site safety plans, site control, decontamination, hazardous waste management, personal protective clothing and equipment, and respiratory protection.

Topics include:

- (a) Review of laws and regulations;
- (b) Names of personnel and alternates responsible for site safety and health;
- (c) Safety, health and other hazards present on the site;
- (d) Use of personal protective equipment;
- (e) Work practices by which the employee can minimize risks from hazards;
- (f) Safe use of engineering controls and equipment on the site; and
- (g) Medical surveillance requirements, including recognition of symptoms and signs which might indicate overexposure of hazards.

**Prerequisites.** a. Students must have taken the initial 40-hour HAZWOPER course that meets the requirements of 29 CFR 1910.120 and 1926.65. The student's supervisor shall verify this before enrollment in the course. b. The student's supervisor shall also verify that the student's 8-hour annual training is current (the student must have had an annual refresher within the last three years; otherwise, the refresher course can not be taken without prior approval from the local District Chief Safety and Occupational Health Office per USACE policy.) c. The supervisor shall also verify the student to be compliant with the following HAZWOPER training requirement contained in 29 CFR 1910.120 and 1926.65 prior to taking the web-based refresher course: (1) employer safety meetings relevant to duties the student is to perform; (2) reviews and critiques of incidents that have occurred in the past year pertinent to the work performed; (3) informational programs or safety meetings to address hazards and protective measures specific to a particular hazardous waste site or job task; (4) review of the Site Safety and Health Plans (SSHPs) and be familiar with personnel/alternates responsible for site safety and health for the project sites where the student is/will be assigned and; (5) hands-on skill exercises relevant to the selection, use and maintenance of Personal Protective Equipment.

**HISTORIC STRUCTURES I**

**392**                      **Length: 36 Hours**                      **35HIS01A**  
**CEUs: 2.8**                      **PDHs: 28**                      **LUs: 28**  
**Tuition: \$1,970.00**

**Purpose.** This course provides an awareness of the unique characteristics, legal requirements, procedures, technical knowledge, and skills necessary to administer, maintain and repair historic properties of the Federal Government. THIS IS AN ISEERB APPROVED COURSE.

**Description.** Guidance: Laws, Regulations, Secretary of the Interior’s Standards, and Criteria and Guidance. Identification and Documentation of Historic Fabric. Maintenance Issues: Inspection and Diagnostics, Maintenance Types and Cost, and Execution of Minor Maintenance and Repair. Design Issues: Exterior Finishes, Interiors, Life Safety and Accessibility, Seismic Design, Historic Landscape Preservation, Material Life Cycle Value, and Energy Conservation and Engineering Support Systems. Procedures: Design, Procurement, Execution-Treatment Issues. Field Trip: Treatment Techniques. Making Choices: Case Studies in Interpreting Preservation Guidelines.

**Prerequisites.** Nominees should be assigned (a) Occupational Series: 0020, 0023, 0025, 0028, 0170, 0193, 0301, 0341, 0342, 0343, 0401, 0408, 0800, 1005, 1008, 1170, 1171, 1173, 1176, 1300, 1301, 1640, 1910, 1960, or other series with cultural resource responsibilities; (b) Grade: GS-07, WG-11, E-6, O-1, or above. Attendees should have a minimum of one year experience in their organization prior to attending this course. Each session will attempt to approximate a mix between installation and USACE personnel. Typical USACE functions appropriate to this course include engineering, project management, construction, contracting, and real estate. Typical installation functions include engineering plans and services, family housing, operations and maintenance, engineering resource management, and environment.

**Notes.** This course requires completion of all class activities to receive a certificate. Approximately 2 hours of overtime may be required to complete the field trip on day four. The student is responsible for bringing this to the attention of his/her supervisor so that an overtime request/determination can be made prior to course attendance. Certification of the amount of time expended on these requirements to supervisors, when requesting overtime compensation, is also the student’s responsibility.

**MANDATORY.** Slide Show Information: Each course participant is required to bring with them no more than three (3) 35mm slides. The slides are used in an introduction session Monday morning. Each participant will be asked to say a few words from their seats about the images. Slides should represent a participant’s

involvement with historic preservation on their respective installations. Examples might include past projects, success stories, or problems areas. This is a networking and ice breaking activity. Hand in slides at registration Sunday evening or first thing Monday morning before session begins.

<u>Session</u>	<u>Location</u>	<u>Date</u>
2005-1	Seattle, WA	03/14/2005 03/18/2005

**HISTORIC STRUCTURES II**

**163**                      **Length: 36 Hours**                      **35HS201A**  
**CEUs: 2.5**                      **PDHs: 25**                      **LUs: 23**

**Purpose.** This course provides craft skill training for technicians and constructions inspectors involved with maintenance, preservation, and rehabilitation of historic structures. Skills training is best offered in the context of craft enhancement, identification of historic fabric, and application of craft skills to the special needs of historic preservation in the Federal government.

**Description.** This course provides twelve hours of classroom training on the following subjects: (a) Secretary of the Interior Standards and Guidelines; (b) Levels of treatment; (c) Character defining features; (d) Preservation of historic fabric, Repair versus Replacement; (e) Tools and tool marks; (f) Deterioration of roofing and flashing, paint, wood, and masonry (causes and cures);

This course also provides twenty-four hours of skills training. This is a 3-day field exercise working with and taught by experienced craftsmen on an actual and ongoing historic preservation project. Field groups are assigned in the three speciality areas of carpentry, painting, and masonry.

Classroom training utilizes slides, power point presentations, video tape, and viewgraphs. Craftsmen are requested to bring work clothes and tools to the course to facilitate the work exercise training.

**Prerequisites.** Nominees must be assigned (a) Occupational Series: GS: 0800, 1910, 1960; WG: 3603, 3605, 3706, 4102, 4604, 4605, 4607, 4618, 4749, and 5318; (b) Grade: GS-07 , WG-11, E-6, O-1 or above. Attendees should have a minimum of one year experience in their organization prior to attending the course. Typical installation functions include family housing maintenance and DEH/DPW operations and maintenance. Typical USACE functions include design specifications and construction inspection.

**Notes.** Each course participant is requested to bring with them no more than three (3) 35mm slides. The slides are used in an introduction session Monday morning. Participants are asked to say a few words from their seats about the images. Slides should represent a participant’s involvement with historic preservation on their respective installations. Examples might include past projects, success stories, or problem areas. This is a networking and ice breaking activity.

Hand in slides at registration Sunday evening or first thing Monday morning before session begins.

### HISTORIC STRUCTURES III

**105**                      **Length: 24 Hours**                      **35HS301A**  
**Tuition: \$980.00**

**Purpose.** The purpose of this course is to take information learned in Historic Structures 1, and apply them to the development of typical historic preservation projects. The format would be case studies pursued as a three-day planning charette shepherding the development planning and programming of a historic preservation project. Course will emphasize: Preservation & Federal regulations, Secretary of the Interior Standards, consultation with State Historic Preservation Officers, to develop a detailed design program.

**Description.** Course will emphasize the roles of project development team members. Roles will include program/project management, cost engineering, design, functional user, maintenance & repair, fire protection, force protection, sustainable design, cultural resources, and SHPO. This course will focus on how to plan and program Historic Structures renovation and maintenance projects at the installation level and civil works project locations.

**Prerequisites.** Nominees include Occupational series 0020, 0023, 0025, 0028, 0170, 0193, 0301, 0340, 0342, 0408, 0800series, 1008, 1170, 1171, 1173, 1176, 1301, 1640, 1910, 1960. Persons involved in any of the above-specified roles are eligible. Persons are expected to have one-year experience in the above-specified roles or series. A basic knowledge of historic preservation laws such as, Introduction to Section 106, or Historic Structures Maintenance and Repair is recommended.

<u>Session</u>	<u>Location</u>	<u>Date</u>
2005-1	Washington, DC	05/02/2005 05/04/2005

### HTRW CONSTRUCTION INSPECTION

**141**                      **Length: 24 Hours**                      **56HCI01A**  
**Tuition: \$1,370.00**

**Purpose.** This course is for working level and management personnel having responsibilities in the USACE Superfund, DERP, and other Hazardous, Toxic, and Radioactive Waste (HTRW) programs. It provides a comprehensive overview of responsibilities and acceptable work practices for Quality Assurance Representatives (QAR) and supervisors on HTRW construction sites. The course provides information to allow the QAR to effectively perform his job in determining if contract work performed, testing, etc., complies with relevant federal, state, and local standards and with the contract documents. This course focuses on QAR activities beginning with Biddability, Constructibility, Operability (BCOE) reviews; through mobilization and preconstruction; construction activities; final cleanup/

demobilization; and operation and maintenance (O&M). Areas of chemistry, health and safety, and environmental regulations are covered in summary level-the course emphasis is on the Quality Management Process.

**Description.** Through lectures, lessons learned, and case studies, this course provides instruction in the following areas: (a) environmental laws and regulations; (b) field monitoring activities including Chemical Data Quality Management, removal containment, and treatment systems; (c) overview of removal, containment, and treatment systems technologies, including surface water control, collection and injection of groundwater, excavation/on-site treatment of soil, collection and disposal of wastes, underground storage tank management, and soils and geotextiles; (d) sampling and testing procedures, interpretation of test results; and (e) health and safety in field activities including work practices to minimize risks for both on-site and off-site personnel and site-specific safety and health plans. A 2 hour site visit is tentatively planned, subject to availability and proximity of sites to the classroom site.

**Prerequisites.** This course is for working level and management personnel with a current or projected assignment in the USACE HTRW program.

<u>Session</u>	<u>Location</u>	<u>Date</u>
2005-1	Philadelphia, PA	05/03/2005 05/05/2005

### HVAC CONTROL SYSTEMS: DESIGN

**340**                      **Length: 36 Hours**                      **35HVC01A**  
**CEUs: 3.1**                      **PDHS: 31**                      **Tuition: \$1,440.00**

**Purpose.** This course is intended for HVAC control system designers responsible for the design, specification, and construction of direct digital control (DDC) systems for HVAC and other building-level controls systems. The focus is on LONWORKS technology which is based on an open-standard multi-vendor communications protocol that supports base-wide monitoring and control functions.

**Description.** This course provides the HVAC control system designer with the knowledge necessary to develop a project design and specification for building-level direct digital controls capable of being interfaced with a base-wide utility monitoring and control system (UMCS). Subjects include: (1) Applied control theory, (2) Control hardware, loops, setpoints, and systems, (3) LONWORKS technology, terminology, devices, and functions, (4) LONWORKS architecture, system networking, and interfaces, (5) LONWORKS Network Services (LNS), (6) Systems Integration, (7) Supervisory functions and operator interface (alarms, scheduling, trending), (8) LONWORKS points schedule assignments, (9) LONWORKS multi-vendor product support and availability, (10) DDC software packages and requirements, (11) LONWORKS demonstration, (12) Calculations, sizing, and selections, (13) Project implementation, (14) Base-wide DDC master planning.



### HVAC SYSTEMS COMMISSIONING

**327**                      **Length: 36 Hours**                      **35MSC01A**  
**CEUs: 3.0**                      **PDHs: 30**                      **Tuition: \$1,570.00**

**Purpose.** This course provides practical technical information to fulfill construction quality verification duties for commissioning of mechanical systems. The course identifies procedures for startup, sequence of operation, and testing that pertain to mechanical equipment and repetitive deficiencies in system performance.

**Description.** Through lecture, visual aids, conferences, and testing, this course presents the following mechanical HVAC subjects: commissioning of mechanical systems, cooling systems, heating systems, air side systems, and control systems. A 2-day lab experience is included where students observe proper performance testing of HVAC Systems.

**Prerequisites.** Nominees must be assigned (a) Occupational Series: 0801, 0802, 0809, 0810, 0830, and 0850; (b) Grade: GS-05 through GS-12; (c) a current or projected position as an engineer, engineering technician, construction representative, or resident engineer with mechanical quality assurance (directly or supervised) responsibilities. Nominees should have completed the Mechanical QV PROSPECT Course, #074, or have experience in mechanical quality assurance equivalent to the basics presented therein. Engineers are exempt from these requirements.

<u>Session</u>	<u>Location</u>	<u>Date</u>
2005-1	Phoenix, AZ	03/28/2005 04/01/2005

### HVAC SYSTEMS TA&B-QV

**68**                              **Length: 36 Hours**                              **35TAB01A**  
**CEUs: 3.0**                              **PDHs: 30**                              **Tuition: \$1,510.00**

**Purpose.** This course provides quality assurance personnel in the field with an understanding of HVAC systems functions and the testing, adjusting, and balancing relationships of the complete system.

**Description.** The course teaches the necessary skills and knowledge to evaluate system installation and system testing, adjusting, and balancing. The course includes a 2-day lab exercise that demonstrates technical material necessary for field technicians and field engineers to perform quality verification.

**Prerequisites.** Nominees must be assigned (a) Occupational Series: 0801, 0802, 0809, 0810, 0830, and 0850; (b) Grade: GS-07, WG-09, or above. Five years of quality assurance experience as a mechanical technician or general quality assurance representative is recommended.

<u>Session</u>	<u>Location</u>	<u>Date</u>
2005-1	Phoenix, AZ	11/15/2004 11/19/2004
2005-2	Phoenix, AZ	01/10/2005 01/14/2005

### HW MANIFEST/DOT CERTIFICATION

**223**                              **Length: 36 Hours**                              **56HWM01A**  
**CEUs: 3.4**                              **Tuition: \$1,120.00**

**Purpose.** This 36-hour course provides initial training regarding regulatory requirements of the Hazardous Materials Transportation Act (HMTA) and the Resource Conservation and Recovery Act (RCRA) as it applies to the generation, transportation, and disposal of hazmat, focusing upon hazardous waste. It enables employers to certify that as required by 49 CFR 172 Subpart H, that their employees have been trained and tested on general awareness and function specific elements described below. In addition, this is an ISEERB approved and DoD approved course as per DoD 4500.9-R, Oct 99. (Note: Certain RCRA and safety related training elements required by 49 CFR 172 Subpart H and 40 CFR 265.16 are typically site-specific and must be performed on the job.

**Description.** Training topics cover the identification and classification of hazardous wastes for purposes of preparing a hazardous waste manifest and fulfilling the DOT requirements for shipping hazardous wastes. Specifically, training topics include RCRA waste classification, land disposal restrictions and notification, generator requirements, manifesting requirements, identification of a DOT Reportable Quantity, use of the Hazardous Materials Table, DOT requirements for determining a shipping name, properly packaging, labeling, marking and placarding, and DOT emergency response requirements, and general security awareness training. In addition, the course addresses special EPA and DOT requirements for shipping asbestos and PCBs.

**Prerequisites.** This course is primarily targeted at persons in the following series: 0800, 0820, 0809, 0810, 0819, 0028, 0029, 0025, 0026, 0401, 1350, 1301, 0893, 0830, 1306, and 1320 (All series involved with environmental programs, including all engineers, chemist, industrial hygienists, health physicists, biologists, geologists, hydrogeologists, program managers, planners, etc.) as well as all Installation environmental staff, Civil Works Environmental Compliance Coordinators and Civil works personnel required to sign hazmat shipping documents and/or hazardous waste manifests. The training is designed for persons with any of the following job responsibilities: identification of proper shipping names for hazardous wastes in accordance with DOT regulations; selection of appropriate packaging, marking, labels and placards in accordance with DOT regulations; RCRA waste identification and classification; completion or review of hazardous waste manifests and/or land disposal restriction notifications; preparation of shipping documents for used oil, asbestos and PCBs; shipping of analytical samples; loading or unloading of hazardous wastes; and transportation of hazardous materials in general. The training is designed for persons with any of the following job responsibilities: identification of proper shipping names for hazardous wastes in accordance with DOT regulations;

selection of appropriate packagings, marking, labels and placards in accordance with DOT regulations; RCRA waste identification and classification; completion or review of hazardous waste manifests and/or land disposal restriction notifications; preparation of shipping documents for used oil, asbestos and PCBs; shipping of analytical samples; loading or unloading of hazardous wastes; and transportation of hazardous materials in general. Target audience also includes all Civil Works Environmental Compliance Coordinators and Civil Works personnel required to sign Hazmat shipping documents and/or hazardous waste manifest.

<u>Session</u>	<u>Location</u>	<u>Date</u>
2005-1	Las Vegas, NV	03/14/2005 03/18/2005

**HW MANIFEST/DOT RECERTIFICATION**

**429**                      **Length: 12 Hours**                      **56HWR01A**  
**Tuition: \$550.00**

**Purpose.** This 12-hour course provides recurrent training regarding regulatory requirements of the Hazardous Materials Transportation Act (HMTA) and the Resource Conservation and Recovery Act (RCRA) as it applies to the generation, transportation, and disposal of hazmat, focusing upon hazardous waste. It enables employers to certify as required by 49 CFR 172 Subpart H, that their employees have been trained and tested in general awareness and function-specific elements described below. In addition, this is an ISEERB approved and DoD approved course as per DoD 4500.9-R. (Note: Certain RCRA and safety related training elements required by 49 CFR 172 Subpart H and 40 CFR 265.16 are typically site-specific and must be performed on the job.)

**Description.** Training topics cover the identification and classification of hazardous wastes for purposes of preparing a hazardous waste manifest and fulfilling the DOT requirements for shipping hazardous wastes. Specifically, training topics include RCRA waste classification, land disposal restrictions and notification, manifesting requirements, identification of a DOT Reportable Quantity, use of the Hazardous Materials Table, DOT requirements for determining a shipping name, properly packaging, labeling, marking and placarding, and DOT emergency response requirements, and general security awareness. In addition, the course addresses special EPA and DOT requirements for shipping asbestos and PCBs.

**Prerequisites.** This course is primarily targeted at persons in the following series:0800 0820, 0809, 0810, 0819, 0028, 0029, 0025, 0026, 0401, 1350, 1301, 0893, 0830, and 1320. (All series involved with environmental programs, including all engineers, chemists, industrial hygienists, health physicists, biologists, geologists, hydrogeologists, program managers, planners, etc.) as well as all Installation environmental staff, Civil Works Environmental Compliance Coordinators, and Civil Works personnel required to sign hazmat shipping documents and/or hazardous waste manifests. The

training is designed for persons with any of the following job responsibilities: identification of proper shipping names for hazardous wastes in accordance with DOT regulations; selection of appropriate packagings, markings, labels and placards in accordance with DOT regulations; RCRA waste identification and classification; completion or review of hazardous waste manifests and/or land disposal restriction notifications; preparation of shipping documents for used oil, asbestos and PCBs; shipping of analytical samples; loading or unloading of hazardous wastes; and transportation of hazardous materials in general.

<u>Session</u>	<u>Location</u>	<u>Date</u>
2005-1	Las Vegas, NV	03/17/2005 03/18/2005
2005-2	Orlando, FL	06/29/2005 06/30/2005

**HYDRO CONST MITI WET**

**440**                      **Length: 32 Hours**                      **33HCM01A**

**Purpose.** To provide state-of-the-science knowledge of wetland hydrology to enable existing Corps experts (engineering, planning, real estate, operations) to fulfill the demand for large-scale ecosystem restoration projects presently authorized or for the future.

**Description.** Wetland hydrology is the single most important factor in designing constructed wetlands. An introduction and overview of the prevalent water source models considering surface and ground water driven systems will be presented from both a case study and lessons-learned viewpoint. Past failures and successes will be examined. Important linkages between hydrology, wetland vegetation, soils, costs, engineering aspects, and real estate considerations are presented. Course focus will be directed toward large scale wetland ecosystem issues. Detailed water budget problems, calculations, solutions, and limiting factors are presented and evaluated in a highly facilitated problem-solving environment by the known experts in the field.

**Prerequisites.** Planning, engineering, regulatory, and natural resources personnel tasked with constructing mitigation wetlands. GS 09-14 personnel operating at full performance level within series.

**HYDROGRAPHIC SURVEY TECHNIQUES**

**56**                      **Length: 38 Hours**                      **35HST01A**  
**CEUs: 3.3**                      **PDHs: 33**                      **Tuition: \$1,920.00**

**Purpose.** This course provides participants with the knowledge and technology required in performing hydrographic surveys in support of USACE navigation, dredging, surveying, coastal engineering, inland waterways and related marine construction activities. The course is designed to provide engineers, engineer technicians, field survey technicians, and A-E contract administration personnel with a technical familiarization of the criteria, standards, and specifications in EM 1110-2-1003, "Hydrographic Surveying", and applying this manual in performing in-house and contracted hydrographic surveys.

**Description.** This course provides instruction on the process and technology used to conduct hydrographic surveys. The instructional program emphasizes the processes required to most effectively perform hydrographic surveys. The major subject areas covered include: hydrography, survey datums, depth and position determination, horizontal and vertical error estimation and analysis, tidal theory, computer hardware and software used for automated hydrographic surveys, fluff measurement, volume computations, multi-beam swath and multitransducer sweep systems, GPS positioning, LIDAR, and project planning. Some horizontal and vertical measurement concepts and techniques will be demonstrated in the field.

**Prerequisites.** Nominees must be assigned (a) Occupational Series: 0800 (engineers, engineer technicians), 0817 and 1300 (field survey technicians), and 0095 and 1100 (A-E contract administration personnel); (b) Grade: GS-05 or above. Waivers will be considered.

<u>Session</u>	<u>Location</u>	<u>Date</u>
2005-1	Portsmouth, NH	06/20/2005 06/24/2005

### HYDROLOGIC ANALYSIS FOR ECOSYSTEM ANALYS

161	Length: 36 Hours	33RAW01A Tuition: \$1,990.00
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**Purpose.** The primary objectives of the course are to provide participants with an understanding of the role of hydrologic engineering in ecosystem restoration and mitigation studies. It also equips the participants with the tools for the various hydrologic engineering analyses necessary in planning and design of these features.

**Description.** Hydrologic and hydraulic processes generally control the creation, restoration, maintenance, size and function of rivers and aquatic and terrestrial floodplain ecosystems. They not only affect the quantity and quality of water available but also influence soil conditions, nutrient availability, salinity (in coastal wetlands), and the flora and fauna that develop along rivers and in wetlands. In riverine ecosystems the quantity of water available, its seasonal timing and duration, river alignment and exposure are some of the principal considerations influencing habitat and wildlife. This course will focus on hydrologic and hydraulic processes and in analyses that apply to ecosystem restoration. Methods for analysis of river flow, sediment transport, water quality, groundwater, and water budgets will be described. The course will present a variety of case studies to demonstrate the hydrologic processes involved in restoration and the application of different methods of analysis.

**Prerequisites.** Nominees must be assigned (a) Occupational Series: Selected 800 and 400 series, 028, 819, 184, 101, 401, and 1301; (b) Grade GS-09 and above. Nominees should be water control managers, hydrologists engineers, environmentalists, biologist, economist, sociologists, ecologist, or study managers.

<u>Session</u>	<u>Location</u>	<u>Date</u>
2005-1	Davis, CA	05/02/2005 05/06/2005

### HYDROLOGIC ENGINEERING FOR PLANNING

57	Length: 36 Hours	35HEP01A Tuition: \$2,290.00
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**Purpose.** This course provides an understanding of basic hydrology and hydraulics concepts and their application in water resource planning.

**Description.** The course provides participants with a conceptual understanding of hydrograph analysis, fluvial hydraulics, frequency analysis, reservoir studies, and hydrologic studies for ecosystem restoration. The course is intended for professionals engaged in planning who have a limited background in the basic principles and theory of hydrology and hydraulics and their application in planning studies.

**Prerequisites.** Nominees must be assigned (a) Occupational Series: Selected 0000-0100, 0400, 0800, and 1300; (b) Grade: GS-05 or above. Participants should be professionals with a limited background in hydrologic engineering who are (or soon will be ) engaged in water resource planning investigations.

<u>Session</u>	<u>Location</u>	<u>Date</u>
2005-1	Davis, CA	12/06/2004 12/10/2004

### HYDROLOGIC ENGR APPLICATIONS FOR GIS

219	Length: 36 Hours	35GIS01A Tuition: \$1,900.00
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**Purpose.** This course provides the basic skills to utilize a Geographic Information System (GIS) to develop data and display results for hydrologic and hydraulic engineering analysis.

**Description.** This course provides information in lectures and workshops on: (a) GIS concepts and their application in H&H analysis; (b) acquisition of GIS data sets; (c) the National Geospatial Data Clearinghouse, and Corps of Engineers policies on geospatial data and systems; (d) use of GIS data sets and Arc/View with the HEC-HMS for hydrologic analysis and HEC-RAS for river hydraulics; (e) combining H&H results with GIS data sets for flood analysis and planning; and (f) case studies of GIS application in H&H analysis, feasibility studies, and water control.

**Prerequisites.** Nominees must be assigned (a) Occupational Series: selected 0028, 0029, 0800, and 1300; (b) Grade: GS-07 or above. Some prior experience or GIS training (such as PROSPECT GIS Introduction) is recommended. Arc/Info application experience would be desirable. Student should be in a position to apply GIS methods in the near future.

<u>Session</u>	<u>Location</u>	<u>Date</u>
2005-1	Davis, CA	02/07/2005 02/11/2005

**HYDROLOGIC MODELING WITH HEC-HMS**

**178**                      **Length: 36 Hours**                      **35HAF01A**  
**Tuition: \$1,950.00**

**Purpose.** Participants will acquire knowledge and experience in simulating rainfall-runoff processes using the new Hydrologic Modeling System (HEC-HMS) as a tool. Applications include floodplain management, flood forecasting, and water resource planning.

**Description.** The course covers basic hydrologic engineering techniques for rainfall-runoff analysis. Topics include: basin average rainfall and loss rate determination, unit hydrograph techniques, streamflow routing, and methods for modeling runoff throughout a watershed composed of multiple subbasins and river reaches. Workshops will provide hands-on experience in applying these techniques using the HEC-HMS computer program. HEC-HMS is the next-generation successor to the HEC-1, Flood Hydrograph Package. HEC-HMS employs a graphical user interface to provide capabilities to create models, perform simulations, and review results. The program includes new capabilities for spatially distributed runoff and continuous simulation, and operates on a Windows PC or SUN X-window computer.

**Prerequisites.** Nominees should be assigned (a) Occupational Series: 0400, 0800, and 1300; (b) Grade: GS-07, or above. Course nominees should be in a position where they are, or will be within the next year, conducting flood studies involving rainfall-runoff modeling. Familiarity with Windows-based computer systems is desirable.

<u>Session</u>	<u>Location</u>	<u>Date</u>
2005-1	Davis, CA	01/10/2005 01/14/2005

**INSTL SUPPORT**

**390**                      **Length: 38 Hours**                      **46ISB01A**

**Purpose.** This course provides students with a working knowledge and awareness of the basic missions, functions, policies, procedures, and organizational structures of the installation Directorate of Public Works Base Civil Engineer and the U.S. Army Corps of Engineers (USACE) district-level organizations. Its purpose is to inform and train DPW/BCE and district personnel involved in requesting, providing, and managing installation support services.

**Description.** The course focuses on the accomplishment of reimbursable funded programs and fostering a partnering relationship between the installation and district staff. The course uses a mix of lectures, practical exercises, case studies, and group discussions to convey a large amount of information that is essential to establishing a successful installation support program from both the installation and district perspectives. The

course emphasizes (a) typical mission, function, and organizational structure of a DPW and a district office; (b) the Army and USACE Installation Support Program and the global installation support organization/network; (c) authorities, policies, and procedures; (d) statutory and regulatory requirements and constraints; (e) planning, engineering studies, environmental, and other support services; (f) architect-engineer contract support, design execution and project management; (g) construction execution and contract management; and (h) partnering and customer service and sensitivity.

**Prerequisites.** Attendees should have been in their respective organizations a minimum of one year before attending this course. Target grade level of attendees is GS-07 and above. Each session will attempt to approximate a 50-50 mix of installation/base and district personnel. Typical functional areas appropriate for this course are the same for both installation/base and district personnel. Primary functional areas include engineering, construction, project management, environmental, housing, operation and maintenance. Secondary functional areas include resource management, contracting and real estate.

**SPECIAL NOTE:** This is a highly effective onsite training course. Onsite sessions allow the district and their supported installation to participate together in the learning and partnering process.

**INSTRUCTIONAL METHODS**

**64**                      **Length: 40 Hours**                      **48ITB01A**  
**Distance Learning (Web) – 12 hours**  
**Classroom – 28 hours**

**Purpose.** This course provides potential instructors and facilitators in the Proponent Sponsored Engineer (PROSPECT) Program with knowledge of, as well as practice with, implementing methods and techniques necessary to design, develop, instruct, and evaluate lesson materials in a course of instruction and the methodology necessary to successfully facilitate Corps-peculiar training.

**Description.** Topics covered through lectures, demonstrations, and practical exercises include Learning Models (Corps of Engineers Systems Approach to Training (COESAT), Adult Learning Theory, and Experiential Learning Model), roles of the instructor, writing learning objectives, lesson planning, design and development of course materials, instructional aids and technology, classroom management techniques, creative learning tools and media, questioning and evaluation techniques, and methods of modeling the environment in order to create a stimulating, motivating learning experience. Participants will be required to complete seven online learning modules and successfully pass the learning assessment located at <http://pdsc.usace.army.mil> prior to attending the 28 hour classroom training. Participants who are potential classroom instructors will demonstrate mastery of these topics through the development and presentation of a 15-minute lecture with

questions and 20-minute directed discussion or experiential exercise. Participants who are potential facilitators for video-based instruction will participate in a practicum to facilitate a sub-module, utilizing correct facilitating techniques.

**Prerequisites.** This course is designed for potential instructors and facilitators in the PROSPECT program. Participants in this course will be nominated by Professional Development Support Center course managers and learning advisors, or by PROSPECT course proponents.

### INTERIOR FLOODING HYDROLOGY

**173**                      **Length: 36 Hours**                      **35IFH01A**

**Purpose.** This course provides the participant an opportunity to gain a working knowledge of available techniques for hydrologic analysis of flood hazard for interior areas.

**Description.** Interior area flood problems arise when natural drainage paths are blocked such as by levees, floodwalls, and coastal barriers. This course characterizes the interior flooding problem and provides techniques for evaluating such measures as detention basins, gravity drains, and pumping stations. Simulation techniques, coincident frequency analysis, and other approaches are treated in lectures, problem-solving sessions, and case studies. Engineering and other considerations in selecting and sizing interior flood control facilities are emphasized. Action required to preserve the functional capabilities of interior flood facilities are discussed. The newly-developed Interior Flooding Hydrology computer program will be used for lectures, demonstrations, and workshops.

**Prerequisites.** Nominees must be assigned (a) Occupational Series: Selected 0800 and 1300; (b) Grade: GS-07 or above. The participant should have a working knowledge of surface water hydrology and open channel hydraulics. In addition, it is required that course participants be in positions, or anticipate being in positions, where they will be involved in interior flood control studies within the next year or two.

### INTERPRETIVE SERVICES

**72**                      **Length: 24 Hours**                      **53INT01A**  
**Tuition: \$1,150.00**

**Purpose.** This course is intended for those employees in natural resources management career fields and others who have interpretation or related job responsibilities. The course is designed to develop the skills of Interpretive Services and Outreach Program managers in the Corps to show how to develop, evaluate, and contract interpretive media, and to demonstrate the use of regulations that can enhance the Interpretive Services and Outreach Program.

**Description.** After completing the course, the student should be able to develop and maintain an effective

interpretive services program. Topics covered include (a) definitions of interpretation and outreach; (b) objectives of Corps interpretive efforts; (c) role of the manager in interpretation; (d) target groups and media selection; (e) use of volunteers; (f) use of cooperating associations; (g) visitor center exhibit and wayside contracts; and (h) interpretive planning and evaluation.

**Prerequisites.** Nominees must be assigned (a) Occupational Series: 023, 025, 026, 028 and 1001 as well as all the 400 series; (b) Grade: GS-05 or above; (c) employees in job series other than those listed above who have interpretation as part of their job responsibilities. It is recommended, but not required, that nominees have completed Certified Interpretive Guide training by the National Association for Interpretation or equivalent training.

Session	Location	Date
2005-1	Huntsville, AL	02/01/2005 02/03/2005
2005-2	Huntsville, AL	03/16/2005 03/18/2005

### INTRO TO GEN CONST—QV

**738**                      **Length: 32 Hours**                      **35GCQ01A**  
**LUs: 28**                      **Tuition: \$225.00**

**Purpose.** This course provides the participant with an introductory technical knowledge required for the quality verification of all elements of building construction, based on guide specifications, and identifies quality assurance personnel's role as it relates to construction quality management. This course should be a prerequisite for the classroom General Construction--QV course.

**Description.** The topics covered in this course are divided into ten modules, as follows: (a) Quality Management; (b) Site Utilities/Plumbing; (c) Concrete/Masonry; (d) Structural Steel/Welding; (e) Carpentry/Insulation/Hardware/Tile; (f) Roofing/Sheet Metal; (g) Interior Finishes; (h) Air-Conditioning/Mechanical Insulation; (i) Heating/Air Distribution; and (j) Electrical.

**Prerequisites.** Nominees must be assigned (a) Occupational Series: 0801, 0802, 0809, 0810, 0830, and 0850; (b) Grade: GS-05 or above; (c) Other: Current or projected assignment as quality assurance personnel, construction general or technical personnel, or engineers with verification responsibilities. The fact that this course is oriented to building construction should be weighed when nominating a civil works candidate. Students should have completed the Construction Quality Management (classroom or exportable) course.

### INTRO TO WETLANDS-WBT

**820**                      **Tuition: TBD**

**Purpose.** Under Development

**Description.** Under Development

**Prerequisites.** Under Development

 **INVENTORY MGMT-WBT**

**798**                      **Length: 4 Hours**                      **Tuition: N/C**

**Purpose.** This purpose of this course is to familiarize personnel of the Corps' policies concerning inventory and financial management and standard inventory practices.

**Description.** Modules of instruction include inventory accounting policy; inventory data conversion instructions; CEFMS inventory management and implementation of the inventory management plan.

**Prerequisites.** This course is open to all logistics management personnel.

**IT FOR MANAGERS**

**984**                      **Length: 32 Hours**                      **54PB101A**  
**Tuition: \$1,200.00**

**Purpose.** To understand Integrated Facilities System (IFS) Capabilities: Maximize use of IFS as a decision making tool and to assess key performance indicators to implement process improvements or evaluate contractor performance.

**Description.** This course will involve 4 levels of Management: (1) Executive Level: which will define facility management executive level information; familiarize the Directorate of Public Works (DPW) and anagement personnel with the IFS hierarchy and structure to better understand its functionality, (2) Industrial Engineering Principles: demonstrate practical techniques through data export and import into graphical presentations software, (3) Activity Based Management: apply ABM principles to the R&A process and use IFS as a means for activity based costing and primary data source for analysis, (4) Installation Executive Information System (IEIS-HQEIS): demonstrate value of EIS and purpose and show and demonstrate how EIS links to other systems.

**Prerequisites.** Nominees must have taken the DPW Management Orientation Course #989 or DPW Basic Orientation Course #988. The target audience for this class is DPW Branch and Division Chiefs, DPW Operations, ACSIM Proponents, other installation support personnel, Garrison Commanders, Deputy Commanders.

<u>Session</u>	<u>Location</u>	<u>Date</u>
2005-01	Huntsville, AL	07/18/2005 07/21/2005

 **LANDSCAPE—QV**

**755**                      **Length: 16 Hours**                      **31LQV01A**  
**LUs: 8**                      **Tuition: \$225.00**

**Purpose.** This course covers verifying, site preparing, excavating, installing, finishing, and accepting turfing and planting of trees, shrubs, ground covers, and vines for construction contracts. Included are uniform methods and procedures to verify and accept turfing and planting contracts. It may be used during preconstruction or coordination meetings to address what is expected of the landscape contractor in terms of turf and plant quality.

**Description.** Topics covered in this course are divided into five modules, as follows: (a) The Preparatory Phase; (b) The Initial Phase; (c) Installation of Plant Material and Turf; (d) The Follow-Up Phase; and (e) The Acceptance Inspection.

**Prerequisites.** Nominees should be assigned (a) GS-05 and above; (b) Occupational Series 0800; (c) as quality assurance personnel who assume landscape contract quality and those in job series who develop landscape specifications. Students should have completed the Construction Quality Management (classroom or exportable) course.

**LEADERSHIP FOR LEARNING**

**34**                      **Length: 32 Hours**                      **21HR401A**  
**Tuition: TBD**

**Purpose.** To develop a shared understanding of the Learning Organization Doctrine, what a learning organization is and how leaders create learning, a common language of leadership for current leaders and those who might be leaders, the selection and development of leaders as a "Be, Know, Do, Learn" process, how leaders understand the Context they operate in, the Logic necessary for success, and the Process for leading organizational change.

**Description.** The Corps' intent is to develop leadership at all levels to address current challenges. "Leaders at All Levels" requires a shared understanding of effective leadership today which is not vested in position, but is created through interactive, collaborative relationships. This understanding includes why today's knowledge and service work requires a particular kind of leadership at all levels of the Corps. This course about effective leadership today helps learners understand their assumptions about leadership as well as the importance of enhancing strengths rather than repairing weaknesses. They will also learn about their own strengths and character as potential leaders. The course explains the importance of selecting and developing this effective leadership that is required by the challenges, strategic direction, values and vision of the Corps. Based on the Be-Know-Do-Learn Cycle of continuous improvement, learners will understand the

elements of improved leadership: character (including talent themes), knowledge and skills, and the continuous learning leaders need to be effective leading learning organizations. Many leader-development programs today do not distinguish between knowledge, skill or character development, and miss systematic organizational learning entirely. This course will focus on understanding the interrelationships between context, logic, character, knowledge, skills, organizational learning, effectiveness, and innovation.

**Prerequisites.** Nominees may be employees in Grades GS/GM 11-15 serving in, or anticipating serving in, a leadership role. Once selected, participants will complete the Strengths inventory via Gallup StrengthsFinder.

Session	Location	Date
2005-1	Huntsville, AL	11/30/2004 12/03/2004
2005-2	Phoenix, AZ	01/11/2005 01/14/2005
2005-3	Virginia Beach, VA	03/16/2005 03/19/2005
2005-4	St. Louis, MO	05/20/2005 05/23/2005

### LUBRICATION OF MECHANIZED EQUIPMENT

**412**                      **Length: 30 Hours**  
**Tuition: \$1,220.00**

**Purpose.** This course is designed primarily for Corps personnel who have hydropower, navlock, and spillway maintenance responsibilities; such as supervisors, mechanic crew foremen, engineers, powerhouse mechanics, and technicians. It provides a comprehensive understanding of lubrication issues in hydropower facilities, navigation locks, and spillways. It may also be of benefit to design engineers who need a broader knowledge of lubricant characteristics and performance.

**Description.** Through lectures, visual aids, and case study sessions, this course covers the following subjects: (a) friction, wear and lubrication fundamentals; (b) lubricant formulation; (c) turbine oil additives and their function; (d) essential characteristics of turbine oils; (e) turbine oil sampling, testing, and interpretation of test data; (f) an introduction to proactive maintenance practices based on tracking and trending of test data; (g) compatibility of turbine oils; (h) oil purification; (i) oil filtration and contamination control; (j) lubricating greases - classification, formulation and application; (k) compatibility of greases; (l) hydraulic fluids; (m) compressor oils; (n) gear oils; and (o) environmentally acceptable lubricants. The course includes a tour of a Corps powerhouse.

**Prerequisites.** Nominees must be assigned in GS or WG Occupational Series as engineers, supervisors, mechanic crew foremen, mechanics, and technicians at Corps' facilities with responsibility for operations and maintenance. Exceptions may be considered for COE design engineers, and personnel involved with management and planning in hydropower related organizations, but not directly involved in hydropower O&M.

Session	Location	Date
2005-1	Nashville, TN	05/09/2005 05/12/2005

### MANAGEMENT OF HYDROPOWER-O&M

**376**                      **Length: 36 Hours**                      **35MHO01A**  
**Tuition: TBD**

**Purpose.** This course is designed primarily for civil works managers, supervisors, engineers, and technicians who have hydropower operations and maintenance responsibilities. It provides a comprehensive understanding of the management of the hydropower facilities. It may also be of benefit to planners, design engineers, hydrologists, and Reservoir Control Center staff who need an understanding of hydropower O&M from the field level perspective.

**Description.** Through the use of lectures and tours, this course covers the management of Corps of Engineers hydroelectric generating stations. It includes the integration of generating stations into larger energy delivery systems. It considers environmental requirements, power system accounting, maintenance management, power system operation, safety consideration, material flow, benchmarking, and control systems. The course includes a tour of a Corps powerhouse, a power marketing agency training group, and a major power transmission facility. Prospective students should be managers or prospective managers of Corps of Engineers hydroelectric assets.

**Prerequisites.** Nominees must be assigned (a) Occupational Series: 0025, 0100, 0400, 0800, and 1600; (b) Grade: GS-09 or above; (c) as engineers and technicians at hydropower plants for operations and maintenance; (d) as managers and supervisors with responsibility for hydropower plants for operations and maintenance; (e) to district or division office level positions in hydropower operations and maintenance; to positions requiring an extensive knowledge of hydropower operations and maintenance practices, especially those anticipating assignment to a position in hydropower operations and maintenance; and (f) as planners, designers, and water control engineers who need an understanding of the practical side of hydropower O&M in order to perform their mission.

Session	Location	Date
2005-1	Portland, OR	05/09/2005 05/13/2005

### MASONRY CONST—QV

**752**                      **Length: 12 Hours**                      **35MCO01A**  
**LUs: 8**                      **Tuition: \$225.00**

**Purpose.** This course discusses the basic requirements for masonry construction for seismic and nonseismic areas for reinforced and nonreinforced bearing and nonbearing walls. Its focus is on areas that quality assurance personnel should consider to identify and correct potential problems during construction.

**Description.** The training materials include a ½” videotape cassette, a Facilitator’s Guide, and a Student Study Guide. Topics covered include (a) Applicable Codes, CECS 04200, 04230, TM 5-809-3; (b) Materials and Approvals: (1) Blocks: hollow non-load bearing, hollow load bearing, solid load bearing, (2) Bricks, (3) Mortar and grout, (4) Vertical and horizontal reinforcement, and (5) Flashings; (c) Sample Panels; (d) Masonry Wall Types: (1) Conventional, (2) Composite wall, and (3) Cavity wall; (e) Concrete Masonry Unit (CMU) Lintels; (f) Bond Beams; (g) Control Joints; (h) Hot and Cold Weather Protection; and (i) QA and QC Requirements.

**Prerequisites.** Students should be assigned to quality assurance duties and have a basic knowledge of quality control quality assurance responsibilities. Students should have completed the Construction Quality Management (classroom or exportable) course.

**MASONRY STRUCTURES DESIGN**

**317 Length: 36 Hours 35MSD01A**  
**LU: 25 Tuition: \$1,530.00**

**Purpose.** This course familiarizes the engineer in design and construction practices including criteria, procedures, and specifications for masonry structures. The course instructs Corps engineering personnel in the techniques of masonry design and construction utilizing TI 809-06 “Masonry/ Design for Buildings” and seismic issues will be addressed and the basis for all seismic design will be TI-809-05, “Seismic Design for Buildings” and TI 809-05, “Seismic Evaluation and Rehabilitation for Buildings.” other pertinent literature. Approximately 80% of Army buildings include masonry as a building unit. Proper design will eliminate future problems and be cost effective.

**Description.** Topics include (a) masonry materials, properties, and testing; (b) design loads; (c) reinforced masonry design and construction; (d) lateral load considerations and shear wall design; (e) column/plaster design; (f) masonry lintels; (g) bond beams; (h) masonry specifications; (i) masonry details; (j) workshop design problems; (k) evaluation and retrofit; and (l) quality assurance. After taking this course the structural engineer should be able to design a cost effective building that has incorporated the latest technologies to produce a building with the desired structural integrity. The manuals to be used are TI 809-06, “Masonry Design for Buildings” along with other Corps manual and referenced national guidance and standards.

**Prerequisites.** Nominees must be assigned (a) Occupational Series: Selected 0800; Grade: GS-07 or above. Nominees should be engineers with masonry design or construction responsibilities. Course is also open to Air Force and Navy personnel.

Session	Location	Date
2005-1	Huntsville, AL	07/18/2005 07/22/2005

**MASTER PLANNING**

**75 Length: 36 Hours 46PMP01A**  
**CEUs: 2.5 PDHs: 25 LU: 25**  
**Tuition: \$1,200.00**

**Purpose.** This course is an introduction to REAL PROPERTY MASTER PLANNING for planners and Real Property Specialists at Army installations and Corps of Engineers district levels. The goal of the course is to make planners more effective by providing them with the information, understanding, and tools they need to operate within the Army Real Property Master Planning system. For non-planners, this course provides an overview of how an installation’s planning is performed and how their organizations fit into the process. General planning principles covered in this course may be applicable to the U.S. Army Reserves and other military services and Government agencies.

**Description.** Through lectures, case studies, group interaction, and practical exercises, this course will (a) explain the clarify AR 210-20, Master Planning for Army Installations; (b) present the planning process/methodology in general and explain how it is applied to the Real Property Master Planning system; (c) show the role and relationship of real property planning to the Army’s Planning, Programming, Budgeting, and Execution System (PPBES); (d) explain the structure of the Army and its installations and how and where the facility planner fits into it; (e) emphasize that planning for any complex system requires teamwork and coordination; (f) explain how to establish and manage the Real Property Planning Board; (g) emphasize real-time understanding on how to complete charettes; and (h) present an overview of sustainable development concepts.

**Prerequisites.** Nominees must be assigned to GS-05 or above and associated with military installation real property planning and management support functions at Army installation/communities, MACOMs, MSCs, USAR, RSCs, USACE divisions/districts, and/or a supporting contractor.

Session	Location	Date
2005-1	Huntsville, AL	04/11/2005 04/15/2005
2005-2	Huntsville, AL	06/20/2005 06/24/2005

**MECHANICAL—QV**

**74 Length: 35 Hours 35MCQ01A**  
**CEUs: 3.2 PDHs: 32 Tuition: \$1,040.00**

**Purpose.** This course provides the participant with information, procedures, and problem area solutions that must be known to effectively perform mechanical quality assurance duties. The course specifically addresses preparatory, initial, and follow-up inspection techniques concerning the equipment, material, and testing requirements for mechanical systems common to most building construction.

**Description.** Through lecture, visual aids, conferences, and case study sessions, this course covers such subjects as (a) plumbing, (b) heating, (c) refrigeration, (d) air-conditioning, (e) fire protection, (f) HVAC controls, (g) outside utilities, (h) insulation, and (i) underground storage tanks. It emphasizes the government QA representative's role in construction quality management.

**Prerequisites.** Nominees must be assigned (a) Occupational Series: 0801, 0802, 0809, 0810, 0830, and 0850; (b) Grade: GS-05 through GS-12. Nominees should have a current or projected assignment as an engineer, engineering technician, or construction representative, GS-12 and below, with mechanical quality assurance representative responsibilities. Nominees must not have attended this course or a similar course within the past 5 years.

<u>Session</u>	<u>Location</u>	<u>Date</u>
2005-1	Arlington, TX	10/18/2004 10/22/2004
2005-2	Salt Lake City, UT	06/20/2005 06/24/2005

**MII ADVANCED**

**312**                      **Length: 36 Hours**                      **54MGA01A**  
**CEUs: 2.8**                      **PDHs: 28**                      **LUs: 28**  
**Tuition: \$1,260.00**

**Purpose.** This course provides cost engineering professionals with advanced instructions on accessing and utilizing the components of the MII 32-bit software program not provided in the MII 32 bit basics course. This course presents detailed information on: (a) Military Programs, Civil Works, Environmental and Parametric Estimating; (b) ENG Form 3086 Preparation; (c) Crew Productivity Analysis for Civil Works; (d) Military Program, Civil Works and Environmental Work Breakdown Structures; (e) Management of MII Databases and tables and (f) Other Advanced Cost Engineering Tools.

**Description.** The course provides instruction on the use of parametric worksheets and quantity linking (parametric modeling) for the development budget, as well as detail cost estimates. This modeling approach and other estimating techniques are used to develop ENG Form 3086 estimates in the proper electronic format. Parameter worksheets, quantity linking, and assemblies are also applied to crew productivity analysis for the development of Civil Works (CW) estimates. The course explores estimate structures development and reporting to accommodate the CW Code of Accounts and the Military Programs and Environmental Work Breakdown Structures (WBS). Students will work with database functions to create site-specific unit prices, modify equipment costs for project specific circumstance, and adjust crew for overtime and shift differential.

**Prerequisites.** Nominees should be (a) Occupational Series: Selected 0800 series; (b) Grade: GS-9, minimum; (c) knowledgeable of the MCACES for Windows

32-bit software applications and the cost engineering rules and regulations; (d) knowledgeable of Microsoft Windows (TM) software application (WinNT or later). This course is open only to DoD personnel; other nominees must obtain CECW-EI approval and may be permitted to attend on a last priority basis.

<u>Session</u>	<u>Location</u>	<u>Date</u>
2005-1	Huntsville, AL	06/20/2005 06/24/2005

**MII BASIC**

**305**                      **Length: 36 Hours**                      **54MCA01A**  
**LUs: 36**                      **Tuition: \$1,150.00**

**Purpose.** This course provides cost engineering professionals with instruction in the preparation and execution of computerized cost estimates using the latest MII cost estimating software program. This course also supplements computerized estimating with ready-reference material intended to improve the participant's knowledge of Corps of Engineers policies and procedures for preparing government estimates for Military, Civil Works and Environmental construction projects.

**Description.** Through lectures, demonstrations, and hand-on microcomputer usage, this course covers the basic computerized aspects of estimating using the latest 32-bit version of MCACES (MII), the new electronic Unit Price Book (UPB) and other supporting databases and tables (i.e., crew, equipment, assemblies, labor, etc.) The student is required to complete quantity takeoffs and prepare detailed cost estimates, which may require work to be done after regular class hours. A pretest and posttest will be given.

**Prerequisites.** (1) Nominees must be assigned (a) Occupational Series: Selected 0800, 0802, 0810, 0830, and 0850; (b) Grade: GS-07 and above; (2) This course is open only to DoD personnel. Other participants must obtain CECW-EI approval and may be permitted to attend only on a last priority basis; and (3) Participants should have at least a basic knowledge of microcomputers and the Microsoft Windows NT or later operating environments. Previous exposure to MCACES Gold and MCACES for Windows 16-bit software programs are helpful.

**Notes.** This course contains requirements which are mandatory for course completion and may require an estimated 2 hours of overtime. It is your responsibility to bring this to the attention of your supervisor so that an overtime request can be made by your appropriate personnel. It's also your responsibility to certify the amount of time expended on these requirements to your supervisor when you request overtime compensation.

<u>Session</u>	<u>Location</u>	<u>Date</u>
2005-1	Huntsville, AL	04/18/2005 04/22/2005
2005-2	Huntsville, AL	05/07/2005 05/11/2005

**MILITARY MUNITIONS RESPONSE PROG  
(MMRP)**

**399**                      **Length: 32 Hours**                      **58EXS01A**  
**Tuition: \$1,370.00**

**Purpose.** This workshop is for project managers and technical disciplines, safety and occupational health professionals, quality, legal, public affairs, real estate, and management personnel having responsibilities for conducting response actions under the Military Munitions Response Program. This workshop provides an overview of information concerning the DOD, DA and USACE roles and responsibilities under the MMRP.

**Description.** This workshop consists of classroom instruction focusing on Military Munitions Response Program activities and terminology. The workshop will discuss Military Munitions responses conducted under the Defense Environmental Restoration Program covering Formerly Used Defense Sites (FUDS), Installation Restoration/Base Realignment and Closure as well as work for others. This workshop will provide a broad understanding of the remedial action and removal action processes used to conduct military munitions responses. The workshop also addresses Center of Expertise functional responsibilities, environmental laws and regulations, legal issues, programmatic policies and procedural requirements, project management information, military munitions support for HTRW and Construction activities, detection and disposal, contracting, indemnification, Defense State Memorandums of Agreement, Community Relations, formulation of Restoration Advisory Boards, and Administrative Record requirements.

**Prerequisites.** Attendees should be project managers and technical disciplines, quality, safety and occupational health professionals, legal, public affairs, real estate, and management personnel working on MMR actions.

<u>Session</u>	<u>Location</u>	<u>Date</u>
2005-1	Huntsville, AL	08/01/2005 08/05/2005

**NATIONAL ELECTRICAL CODE**

**78**                      **Length: 36 Hours**                      **35NEC01A**  
**CEUs: 3.0**                      **PDHs: 30**                      **Tuition: \$1,050.00**

**Purpose.** This course increases the proficiency of the electrical engineer and the electrical technician in designing interior systems which meet the requirements of the "National Electrical Code" (NEC) or, when given an actual or intended installation, increases their proficiency in identifying the appropriate code rules and the determination of acceptability.

**Description.** This course covers the application and interpretation of code requirements for the design and construction of interior electrical systems through directed informal discussion sessions and case studies.

Topics include, but are not limited to, interior distribution, motor circuits, calculations, ground fault circuit interrupters, and hazardous areas.

**Prerequisites.** Nominees should be assigned (a) Occupational Series: 0801, 0802, 0809, 0810, 0830, 0850, or 0855; (b) Grade: GS-09 or equivalent wage grade and above. Nominees should be electrical engineers of any grade level or engineering technicians or construction representatives GS-09 or above. Nominees should be familiar with the principles of interior electrical installations or currently be assigned responsibilities for design, construction, or maintenance of interior electrical installations at Corps or other government facilities.

**Notes.** The student may be required to expend more than eight hours of class time on required "homework" assignments for this course resulting in the need for an estimated 4 hours of overtime for the entire week. It is the student's responsibility to bring this to the attention of his/her supervisor so that an overtime determination/request can be made by the appropriate personnel and for certifying the amount of time expended on these requirements if the overtime compensation is used.

<u>Session</u>	<u>Location</u>	<u>Date</u>
2005-1	New Orleans, LA	06/06/2005 06/10/2005
2005-2	Hartford, CT	08/22/2005 08/26/2005

**NEG CONST CONT MODS**

**368**                      **Length: 36 Hours**                      **41NCC01A**  
**CEUs: 2.5**                      **PDHs: 25**                      **LUs: 25**  
**Tuition: \$970.00**

**Purpose.** This course provides instruction that will improve the participant's effectiveness in negotiating construction contract modifications. The course provides a thorough review of the processes in effectively analyzing contractor proposals and government estimates. This course assists the participant in applying sound judgment to arrive at an equitable adjustment. The course is recommended for individuals who are involved in processing and negotiating construction contract modifications.

**Description.** The course provides lectures, discussions, case studies, and workshop sessions, which present a detailed explanation of regulations affecting negotiations, pricing objectives, the independent government estimate, cost or pricing data (truth-in-negotiations), job and home office overhead, contingencies, profit, special modification problems, and negotiation strategy and techniques. This course also covers the manner in which costs are expressed, analyzed, and used in negotiating construction modifications, task orders, and contracts.

**Prerequisites.** Nominees must be assigned (a) Occupational Series: Selected 0340, 0800, 1102, and 0905; (b) Grades: Military: 0-3 and above; Civilian: GS-07 and above; (c) Experience: recommended for person-

nel with 1-3 years of experience in the construction and contract administration functions; (d) Responsibilities: attendees should have or anticipate having responsibility for processing, negotiating, or reviewing construction contract modifications; (e) Knowledges/skills: attendees should possess a general knowledge of the post-award construction contracting process. Previous completion of the Construction Contract Administration course (No. 366) is suggested.

Session	Location	Date
2005-1	Tampa, FL	10/25/2004 10/29/2004
2005-2	Huntsville, AL	02/07/2005 02/11/2005
2005-3	Reno, NV	04/25/2005 04/29/2005

### O&M CONTRACTS

**119**                      **Length: 28 Hours**                      **41OMC01A**  
**CEUs: 2.6**                      **PDHs: 26**                      **Tuition: \$790.00**

**Purpose.** This course provides basic instruction to operations/natural resource managers, park rangers, maintenance supervisors, and operational support personnel on preparing and administering a broad range of service, supply, and small construction contracts and purchase orders used at civil works projects. Individuals needing instruction mainly in formal Construction Contracts should take the Construction Contract Administration course (#366).

**Description.** Contracting procedures being used on civil works projects for operation and maintenance are addressed through lecture, discussion, and exercises. Special emphasis is given to those steps which are key to developing and administering successful contracting programs. As a basic first exposure to O&M contracting, the student will develop a sound understanding of techniques and responsibilities. Specific subjects addressed in the course are: contracting procedures, safety considerations, contract clauses/payments, COR duties and responsibilities, technical contract requirements, formulation of a solicitation, and quality assurance.

**Prerequisites.** Nominees must be assigned (a) Occupational Series: Selected 0023, 0025, 0300, 0400, 0800, 1100 and 4749; (b) Grade: GS-05, WG-05, and above. Students should have current or projected assignments involving project contracting procedures.

Session	Location	Date
2005-1	Huntsville, AL	12/07/2004 12/10/2004
2005-2	Phoenix, AZ	03/22/2005 03/25/2005

### O&M CONTRACTS ADV

**318**                      **Length: 32 Hours**                      **41OMA01A**  
**CEUs: 1.8**                      **PDHs: 18**                      **Tuition: \$1,220.00**

**Purpose.** This course provides operations/project personnel with additional skills for developing and administering service, maintenance, and construction contracts.

**Description.** Through lectures, field exercises, and directed discussion sessions, this course covers contract types, administrative considerations, legal implications, and handling adverse circumstances of O&M contracts. This course provides project contract administration personnel with advanced understanding in project operations where significant reliance on O&M contracting is required.

**Prerequisites.** Nominees must be assigned (a) Occupational Series: Selected 0023, 0025, 0300, 0400, 0800 and 1100; (b) Grade: GS-07 or above or equivalent WG grade and series. Students should be assigned project office contracting responsibilities, or district office personnel involved in contract administration supervision. Students must have completed the Operation and Maintenance Contracts basic course (No. 119).

**Notes.** SPECIAL INSTRUCTIONS. This course includes a one-day field trip. Students should be prepared for inclement weather and bring appropriate shoes and clothing.

Session	Location	Date
2005-1	Spokane, WA	10/19/2004 10/22/2004
2005-2	San Antonio, TX	02/08/2005 02/11/2005
2005-3	Branson, MO	04/12/2005 04/15/2005

### OMBIL APPLICATIONS FOR MANAGERS

**160**                      **Length: 28 Hours**  
**Tuition: \$1,160.00**

**Purpose.** The Operations and Management Business Information Link (OMBIL) is a web-based, business information gateway (on the Corps Intranet at <https://ombil.usace.army.mil>) which links five major Corps business functional systems (navigation, hydropower, recreation, environmental stewardship including natural resources and environmental compliance, and flood damage reduction) with CEFMS for the purpose of data collecting, data management, reporting, and performance measurement. Operations, Program and Project Managers in these major business functional areas need to learn what is available and how to quickly access this web-based interface for tracking, monitoring, and viewing information and for use in making management decisions. Students will perform hands-on-searching and report-building activities in a computer laboratory

**Description.**

- Course will discuss OMBIL purpose and background.
- Overview of information and reports available in five major business areas: Type of data available, what reports can be created, and how the process works, and how to acquire real-time operation data and extract data and create reports. Business area relationships will be explored.
- Develop performance analysis, project performance, output trends and comparisons.
- Students will perform practical exercises in which

they use the web interface to extract and generate general information and reports for their business area.

**Prerequisites.** (a) Nominees should be from all USACE levels (HQ, divisions, districts) who are budget analysts, or operations, program, or project managers involved with navigation, hydropower, recreation, environmental stewardship, and flood damage reduction. Nominees may also be park managers, park rangers, and lock or plant operators responsible for managing operations data. (b) Grades: GS-9 through GS-15 or equivalent.

Session	Location	Date
2005-1	Huntsville, AL	12/07/2004 12/10/2004
2005-2	Huntsville, AL	01/11/2005 01/14/2005
2005-3	Huntsville, AL	04/19/2005 04/22/2005

 **OP BUD APP NONFIN**

**746**                      **Length: 8 Hours**                      **42OBA01A**  
**Tuition: \$125.00**

**Purpose.** This course teaches responsibility center managers how to use operating budgets to facilitate resource decisions, analyze trends, impacts, and operating performance. The course describes cost management theory, defines budget terms and processes, and identifies benefits and applications of operating budgets.

**Description.** Training materials include a ½” videotape cassette, a Facilitator’s Guide, and a Student Study Guide. Training is designed to be accomplished in 8 hours.

**Modules.** The ten modules of instruction presented in the course are (a) Understanding Budget Terminology and Process; (b) Determining Mission and Goals; (c) Considering the Total Workload; (d) Forecasting Future Needs/Impacts; (e) Developing an Operating Budget; (f) Making Corporate Decisions Using the PBAC Process; (g) Determining Rates/Rescheduling; (h) Reviewing Cost Versus Budget; (i) Ensuring Effective Resource Management; and (j) Analyzing Final Budget Execution.

**Prerequisites.** Nominees must be responsibility center managers who direct and control resources to accomplish the mission or operation. All occupational series are eligible.

Session	Location	Date
2005-1	Web-based	10/01/2004 09/30/2005

**OPERATIONS MANAGEMENT**

**245**                      **Length: 32 Hours**                      **46OMW01A**  
**Tuition: \$1,250.00**

**Purpose.** This course will give emerging leaders the operations managers perspective of managing a project.

It also provides an overview of Corps of Engineers operations business processes and systems. It is intended to foster a uniform understanding of the initiatives and improvements introduced in the operations arena over the past several years. It is mission essential training for Operations Managers.

**Description.** This course covers a broad range of topics that personnel in Operations Management must be familiar with. It focuses on: (a) the operations business process; (b) programs and policies in effect for projects and facilities; (c) applicable laws and regulations governing operations; and (d) necessity and values of interaction with stakeholder groups.

**Prerequisites.** Nominees must be: (a) Grade GS-09 or above; (b) directly involved in the management of operating projects for USACE. First consideration will be given to Operations Project Managers and senior MSC, district or project people who aspire to be, or have been identified by management to become, Operations Project Managers.

Session	Location	Date
2005-1	Washington, DC	02/14/2005 02/18/2005
2005-2	Washington, DC	08/08/2005 08/12/2005

**OSHA INSPECTION**

**63**                      **Length: 36 Hours**                      **58INS01A**  
**Tuition: \$990.00**

**Purpose.** This course provides personnel that are assigned collateral-duty safety and health responsibilities with the program basics from which they can administer a division/district or FOA safety and occupational health program. This training is also pertinent for those field construction personnel that are assigned quality assurance roles with corresponding safety and health responsibilities.

**Description.** Lectures, demonstrations, and reading assignments will cover the areas listed below and enable the students to identify safety hazards and areas of noncompliance with Corps of Engineers and Occupational Safety and Health Administration (OSHA) requirements. Specific areas covered include (a) overview of OSHA (current OSHA requirements) and Corps of Engineers safety and health requirements; (b) scaffolding and access; (c) trenching and excavation; (d) temporary electrical service; (e) heavy equipment; (f) personal protective equipment; (g) fire prevention; (h) confined spaces and entry; (i) motor vehicles; (j) safety submittals; (k) accident reporting and recording; and (l) accident prevention plans and hazard analyses.

**Prerequisites.** Students should be assigned as collateral-duty or project safety person, or assigned as construction representative and/or quality assurance representatives, or other personnel with safety responsibilities, e.g., safety committee members.

Session	Location	Date
2005-1	Sacramento, CA	03/07/2005 03/11/2005
2005-2	Huntsville, AL	04/11/2005 04/15/2005
2005-3	St. Louis, MO	06/13/2005 06/17/2005

### PAINT COATINGS (SUB)

**83** Length: 36 Hours 73PCS01A  
**CEUs: 2.6** Tuition: \$1,610.00

**Purpose.** The emphasis of this course is on the painting of Corps of Engineers civil works structures. Handbooks include the civil works construction guide specification UFGS 09965A, "Painting: Hydraulic Structures and Appurtenant Works" and the engineering and design manual EM 1110-2-3400, "Painting: New Construction and Maintenance."

**Description.** This course covers the following topics that affect field painting projects: (a) paint selection; (b) surface preparation; (c) application of paint chemistry; (d) application methods and equipment; (e) corrosion principles; (f) inspection; and (g) environmental and safety regulations.

**Prerequisites.** Nominee must be assigned (a) Occupational Series: Selected 0800 and 1300; (b) Grade: GS-07 and above. Disciplines and grade levels (other than above) are accepted provided nominee's present or anticipated duties require knowledge of paint and coating systems for hydraulic civil works structures. Nominee's job should require knowledge of UFGS 09965A as well as EM-1110-2-3400.

Session	Location	Date
2005-1	Champaign, IL	02/07/2005 02/11/2005

### PAINT, COATINGS AND QA

**84** Length: 36 Hours 35PNT01A  
**CEUs: 3.1** PDHs: 31 LUs: 31  
**Tuition: \$1,330.00**

**Purpose.** This course is designed to reduce painting deficiencies by providing the participant with hands on quality assurance techniques. The basic concepts of paint composition, coating selection, safety, and construction quality management necessary to administer the painting requirements of the plans and specifications will be covered.

**Description.** Through lectures, hands-on demonstrations and laboratory sessions, this course covers such subjects as paint fundamentals; characteristics and selection of coatings; surface preparation and painting of steel and other metals, concrete and concrete block, wood, plaster, wallboard, and other miscellaneous surfaces; paint defects; paint approval; testing instruments; painting specifications; and safety and environmental considerations. Construction Quality Management, Maintenance Painting, and changes in guidance and regulations affecting painting are emphasized. Recent changes to the UFGS 09900 and 09965 are empha-

sized to include the use of the Master Painter's Institute (MPI) specifications.

**Prerequisites.** (a) Grade: All (b) Occupational Series: 0800 and 1300. Other disciplines will be accepted provided nominee's present or anticipated duties require knowledge of coating systems involved in design, construction or facility maintenance. This includes architects and engineers with design, specification and review responsibilities. This course is open to those individuals from DPWs, BCEs, NAVFAC and other government agencies who are responsible for quality assurance, specifying paint requirements for maintenance or new construction and those serving on constructibility review teams.

**Notes.** Capability to provide customized, onsite training upon request anywhere from 8 to 32 hours is available.

Session	Location	Date
2005-1	Arlington, TX	02/14/2005 02/18/2005

### PAVEMENT CONSTRUCTION—QV

**400** Length: 60 Hours 35PVQ01A  
**Tuition: \$2,290.00**

**Purpose.** This course identifies and discusses the requirements for verifying the testing, production and placement of pavements.

**Description.** This course covers current Corps of Engineers techniques for quality assurance of all types of pavements including: (1) subgrade, subbase, and base courses; (2) primes, tacks, and seal coats; (3) surface treatment and slurry seals; (4) plant-mixed bituminous paving mixtures; (5) sampling, testing, handling, mixing, placing, finishing, and curing portland cement concrete pavements. In addition, it covers necessary field tests, interpretation of results, and verification required to assure the production of quality pavements on construction projects. Instruction includes classroom lectures and laboratory demonstrations.

**Prerequisites.** Nominees must be assigned (a) Occupational Series: Selected 0800, 0801, 0802, 0809, 0810, 0830, and 0850; (b) Grade: GS-05 or above. Students must have current or projected assignments as general or pavement construction quality assurance representatives or related duties at the field level. This course is also well-suited for junior engineers as part of the training provided in engineer-in-training programs and for Corps division, district, and field office personnel directly concerned with construction operations. The attendee must not have attended this course or a similar course within the past 5 years.

**Notes.** Course is also valuable to personnel in other series such as 1102 for them to appreciate how pavements are designed, tested and constructed.

<u>Session</u>	<u>Location</u>	<u>Date</u>
2005-1	Vicksburg, MS	01/19/2005 01/28/2005

**PAVEMENT EVALUATION, MAINT & REPAIR**

<b>115</b>	<b>Length: 60 Hours</b>	<b>75PER01A</b>
		<b>Tuition: \$2,540.00</b>

**Purpose.** This course provides engineers, engineering technicians, and qualified shop foremen with tools and techniques for pavement evaluation and project development to the design stage.

**Description.** This course focuses on engineering selection of maintenance and repair for techniques and current technology for effective selection of maintenance and repair for installation pavements. This course provides a sequential approach to data gathering and identification of pavement distresses, their causes, and alternative maintenance and repair techniques. The course also includes project level evaluation, including field and laboratory measurements, non-destructive testing, materials engineering, technical analysis, and preliminary design of feasible alternatives. The relationship of these activities to the PAVER Pavement Management System will be introduced.

**Prerequisites.** Nominees must be assigned (a) Occupational Series: Selected 0800; (b) Grade: GS-05 or above and qualified maintenance foremen (WB-4704/-4703).

<u>Session</u>	<u>Location</u>	<u>Date</u>
2005-1	Vicksburg, MS	05/17/2005 05/26/2005

**PAVEMENT MAINTENANCE TECHNIQUES**

<b>125</b>	<b>Length: 36 Hours</b>	<b>75PMT01A</b>
		<b>Tuition: \$1,860.00</b>

**Purpose.** This course teaches methods and techniques for maintenance and repair of pavements.

**Description.** This course focuses on practical and effective maintenance and repair methods and techniques. Emphasis is on field demonstrations, with supplementary lectures, films, and handout materials. Techniques and applications taught are those which can reasonably be accomplished by facilities engineer in-house activities, but course material also covers recurring and cyclic maintenance requirements and approaches to implementation of preventive maintenance.

**Prerequisites.** Nominees must be assigned to an activity with responsibility for maintenance, repair and improvements of installation facilities (e.g., Army facilities engineer, Air Force base civil engineer) or Corps of Engineers field operations and maintenance activities. This course is designed for maintenance personnel and interested technical staff.

<u>Session</u>	<u>Location</u>	<u>Date</u>
2005-1	Vicksburg, MS	02/28/2005 03/04/2005

**PAVEMENT, DRAINAGE DESIGN & CONSTRUCTION**

<b>85</b>	<b>Length: 60 Hours</b>	<b>35PDC01A</b>
		<b>Tuition: \$2,130.00</b>

**Purpose.** This is a basic course for engineers or technicians responsible for pavement design, construction, and/or maintenance. After completing the course, with proper references, the student should be able to (a) select the best pavement system for a particular application with the consideration of life cycle cost and maintenance; (b) perform a complete design of flexible or rigid pavement including drainage, subdrainage, and freeze and thawing considerations; and (c) correctly identify major defects in the pavement construction and select the proper remedies to correct the problem.

**Description.** Through lectures, tours to laboratories, hands-on exercises, and discussions, this course covers the general concept in pavement design and construction, selection of pavement system, design procedures, construction methods, material testing, surface and subsurface drainage design, computer applications, and new technology in pavement construction.

**Prerequisites.** Nominees must be assigned (a) Occupational Series: Selected 0800 series; (b) Grade: GS-09 or above. Student should have a current or projected assignment as a design or construction engineer or senior technician responsible for pavement and drainage design, construction, or maintenance.

<u>Session</u>	<u>Location</u>	<u>Date</u>
2005-1	Vicksburg, MS	04/19/2005 04/28/2005

**PCA/FINANCE PLAN DEV**

<b>315</b>	<b>Length: 28 Hours</b>	<b>46LCA01A</b>
		<b>Tuition: \$1,700.00</b>

**Purpose.** This course provides project managers, real estate specialists, counsel, and others working project cooperative agreements with the basic knowledge, skills, and abilities needed to develop PCA packages and to conduct financial analyses during project planning and implementation. Participants will learn critical aspects of managing the PCA process from understanding the fundamentals of project finance and financial analysis principles and methods, its relationship to program/project management, funding and construction scheduling and the new start Project Cooperation Agreement (PCA), policy, development, and negotiation.

Lecturers and instructors include the HQUSACE Civil Works staff, field personnel, and representatives of the non-Federal sponsor.

**Description.** Topics include: (a) Policy for New Start/Project Cooperation Agreement Process, Development Negotiation and Processing; (b) Planning, Policy, Pro-

gram, Real Estate, and Legal Considerations; (c) Non-Federal Financing Considerations; (d) Municipal Finance/Credit Analysis/Cost/Revenue and Fiscal Analysis; (e) Program Management and Implementation Procedures and Applications; (f) Budgeting, Funding, and Construction Scheduling; (g) Policies and Procedures to Account for Project Funds, (h) Project Examples and Experiences, and (i) Legal Aspects.

**Prerequisites.** Nominees must be assigned (a) Grade: GS-09 to GS-15; (b) current responsibilities in project planning, study management, engineering management, economic analysis, project management, real estate, local cooperation, new start budget development, legal review, or assigned to the Office of Counsel.

<u>Session</u>	<u>Location</u>	<u>Date</u>
2005-1	San Antonio, TX	03/07/2005 03/11/2005
2005-2	New York, NY	08/15/2005 08/19/2005

 **PHYSICAL SECURITY**

**719**                      **Length: 8 Hours**                      **55PPS01A**  
**Tuition: \$125.00**

**Purpose.** This course trains Corps of Engineers employees, project managers, and supervisors of civil works projects to recognize, evaluate, implement, and maintain the physical security posture of their facilities.

**Description.** The topics covered are divided into eight modules as follows: (a) Protecting Our Natural and National Resources; (b) Physical Security Planning; (c) Protective Measures and Deterrence; (d) Inspection Procedures; (e) Physical Security Requirements for Corps Facilities; (f) Coordination; (g) Preparation for Mobilization and National Emergencies; and (h) Project Physical Security Plan.

This course contains practical exercises that are situation-dependent. Additional time should be allowed for each optional practical exercise scheduled by the facilitator.

**Potential Students.** This course is designed for all managers and supervisors of Corps civil works projects, security personnel, ranger personnel, and any employee desiring an increased awareness of physical security.

**PLANNING FOR ECOSYSTEM RESTORATION**

**348**                      **Length: 36 Hours**                      **33EBE01A**  
**CEUs: 3.1**                      **Tuition: \$1,240.00**

**Purpose.** Ecosystem restoration is a priority mission in the Corps' Civil Works program. Together with traditional environmental mitigation, restoration spans the range of resources from fish and wildlife to watersheds and ecosystems. The formulation and evaluation that leads to restoration projects require a collaborative approach that also involves local sponsors and other stakeholders. This course explores key issues related

to the current practice of ecosystem restoration planning: current and evolving policy, definition and measurement of ecosystem outputs, resource significance, plan formulation, and cost effectiveness/incremental cost analyses. Case studies and a field trip will be utilized to illustrate current practices.

**Description.** Within the context of the six-step planning process [(1) identify problems and opportunities, (2) inventory and forecasting, (3) formulating plans, (4) evaluating effects of alternative plans, (5) comparing alternative plans and finally, (6) selecting a recommended plan] and with a particular emphasis on ecosystem restoration needs, the following topics will be discussed. · Authorities for Corps involvement in ecosystem restoration projects · Environmental outputs and tools available for measuring them · The meaning of resource significance and the importance of the evaluation criteria of efficiency, effectiveness, acceptability and completeness in ecosystem restoration · Fundamentals of ecological principles and processes · Management measures · How risk and uncertainty factor into ecosystem restoration evaluation · The purpose of Cost Effectiveness and Incremental Cost Analysis · How to formulate jointly for ecosystem restoration (NER) and National Economic Development (NED) benefits (NOTE: Although this course addresses evaluation tools and procedures for ecosystem restoration planning, this is not a course in the theory/mechanics of ecological or habitat models such as HEP or HGM.)

**OBJECTIVES.** Upon completion of this training, attendees will be able to: (a) list important authorities related to planning and ecosystem restoration; (b) list and describe the six steps of the planning process; (c) define the importance of resource significance in ecosystem restoration; (d) discuss the need for the evaluation criteria of efficiency, effectiveness, acceptability and completeness in ecosystem restoration; (e) explain some fundamental ecological principles and their use in planning, and; (f) conduct a simple cost effectiveness and incremental cost analysis for an ecosystem restoration project. The course will include a half-day field trip to a local Corps restoration project, and student teams will be responsible for developing and presenting a case study based on the field visit.

**Prerequisites.** Prerequisites: This course is designed for Corps personnel involved in planning and designing, and evaluating environmental restoration projects, including planners, biologists, economists, engineers, outdoor recreation planners, landscape architects, project managers and other planning team members. Recommended grade of GS-09 or above.

**Notes.** This is not a course on the use of HEP, HES, or any other environmental evaluation technique but rather a more holistic view of how one should approach the formulation and evaluation of environmental projects proposed in their district.

Session	Location	Date
2005-1	Charleston, SC	05/16/2005 05/20/2005
2005-2	St. Louis, MO	06/20/2005 06/24/2005

**PLANNING PRINCIPLES AND PROCEDURES**

**77**                      **Length: 36 Hours**                      **35PPP01A**  
**Tuition: \$1,270.00**

**Purpose.** This course provides district and division planners with an overview of how Corps of Engineers water resource projects are planned in accordance with current policies and procedures.

**Description.** Upon completion of the course, this student will have a basic understanding of the principles and policies guiding the planning of Corps Civil Works water resources development projects. Policies and procedures are discussed in a series of short presentations by HQUSACE staff and through class participation in small group exercises. Presentations and class exercises focus on case studies designed to illustrate the planning process and application of guidance and policy. The course presents the basic procedures that enable the student to conduct the planning process under today's requirements. The course covers interaction among the district, division, HQUSACE, Army, and the Administration, and includes a session on new directions in planning. The course is conducted in an informal atmosphere to encourage class interaction.

**Prerequisites.** Participants should be currently involved in the planning of civil works water resources development projects. Prior completion of the PROSPECT Course, "Civil Works Orientation" is highly recommended.

Session	Location	Date
2005-1	Las Vegas, NV	05/02/2005 05/06/2005
2005-2	Arlington, VA	07/11/2005 07/15/2005

**PREVENTION OF SEX HARASS-WBT**

**822**                      **Length: 30 min.**                      **Tuition: \$15.00**

**Purpose.** Prevention of Sexual Harassment remains a mandatory course for Federal Government civilian and military personnel. This course is designed as the annual POSH refresher course for USACE personnel.

**Description.** This course discusses USACE policy and practice on prevention of sexual harassment. Various definitions, behaviors, and scenarios will be portrayed to help students understand what sexual harassment is and how to prevent it. Identifying unacceptable behavior, understanding personal roles and responsibilities and knowing what actions to take will be stressed. Procedures and points of contact for reporting incidents of sexual harassment and a link to on-line regulations are provided.

**PROJ MGT-ENV REMEDIATION**

**260**                      **Length: 24 Hours**                      **46ENV01A**  
**CEUs: 2.2**                      **LUs: 22**                      **Tuition: \$1,320.00**

**Purpose.** District project managers, and other Project Delivery Team members, will learn the Corps' requirements, policy and procedures for managing projects that control, remove or treat Hazardous, Toxic, and Radioactive Waste (HTRW) and/or Ordnance and Explosives (OE).

**Description.** This course focuses on HTRW/OE environmental restoration and clean up projects in the following Corps programs: Formerly Used Defense Sites, Installation Restoration Program, Base Realignment and Closure, U.S. Environmental Protection Agency Superfund Program, Formerly Used Sites Remedial Action Program, and Environmental Support for Others. Short reviews of these programs, applicable laws and regulations, and project management concepts are included. Requirements of ER 5-1-11 U.S. Army Corps of Engineers Business Process are presented. The course emphasizes topics unique to the Corps Project Management Business Process. Program-specific topics as well as general topics common to all HTRW/OE projects are presented: Project initiation, planning, execution and control and operation and maintenance. Instruction utilizes lectures, discussions and case studies with emphasis on student participation — including team exercises with presentations.

**Prerequisites.** Applicants need knowledge of fundamental project management principals, terminology, techniques and tools. Applicants should have general familiarity with HTRW/OE environmental laws and regulations. Recommended preparatory PROSPECT courses include: Environmental Restoration Overview (No. 350) and CERCLA/RCRA (No. 356). Applicants must be GS-09 or above. Selection priorities are: first, Corps district employees with a current or projected assignment as a project manager and/or a member of a project delivery team including customers in one of the above programs; second, immediate supervisors of employees potentially eligible for priority one; and third, Corps program managers or functional managers with HTRW/OE responsibilities, or applicants from other agencies.

Session	Location	Date
2005-1	Omaha, NE	05/24/2005 05/26/2005

**PROJECT MANAGEMENT**

**355**                      **Length: 24 Hours**                      **46PJM01A**  
**CEUs: 2.3**                      **PDHs: 23**                      **LUs: 22**

**Purpose.** This course is designed primarily for those individuals who are, or will be, a project manager in any program area. Project team members from functions other than project management may benefit through improved understanding of the project manager's roles and responsibilities.

**Description.** The course provides the basic philosophy of project management, establishes and explains project management objectives, and provides tools for project management. The course seeks, through presentations, discussions, illustrations, and case studies to provide current guidance in using project management techniques. Generic project management tools and techniques are reinforced by the use of civil works and military programs case studies. Instruction covers the development of a project management plan, work breakdown structures, and project schedules; techniques for cost estimating, risk assessment/contingency management; use of parametric and detailed cost estimates, code of accounts; keeping track; work in progress, PM reports; assessing earned value; development of 902 limits; and the project review board process.

**Prerequisites.** Nominees must be assigned or anticipate being assigned as an individual project manager or technical member of a project team at Grade GS-11 or above. Pocket calculators are needed for case study work.

**PROJECT MANAGEMENT - MIL PROG**

**88**                      **Length: 36 Hours**                      **46PMM01A**  
**CEUs: 3.1**                      **PDHs: 31**                      **LUs: 33**  
**Tuition: \$1,240.00**

**Purpose.** This intermediate level course provides the project manager in a programs/project management division with management procedures, tools, and techniques necessary to effectively manage military construction (MILCON) projects from design authorization through construction completion.

**Description.** Through lectures, directed discussions, and case studies, this course covers the entire spectrum of project management of military programs. It includes the MILCON budget cycle, regulations and philosophy, planning and programming, the design process, A-E and in-house design management, A-E selection and negotiations, project advertising and award, and project management responsibilities during the construction phase. It also addresses project management business process (PMBP) requirements contained in ER 5-1-11, U.S. Army Corps of Engineers Business Process.

**Prerequisites.** Nominees must be Grade: GS-09 or above. First priority will be given to personnel currently assigned as a military programs project manager. Second priority will be given to those personnel currently assigned to a military project delivery team.

Session	Location	Date
2005-1	Huntsville, AL	01/31/2005 02/04/2005
2005-2	New Orleans, LA	04/18/2005 04/22/2005
2005-3	Arlington, VA	06/13/2005 06/17/2005



**PROJECT MGT BUS PROC**

**762**                      **Length: Varies**  
**CD-ROM**                      **Tuition: N/C**

**Purpose.** The Project Management Business Process (PMBP) Curriculum Initiative is to develop a curriculum that continues to nurture project management as the business process within the Corps of Engineers and guide an individual or an organization in the progressive development of those skills associated with the PMBP. This training will develop a competency-based curriculum to assist in transforming USACE into a customer-focused, team-based, learning organization through effective implementation of project management as the primary business process. To create and sustain the PMBP requires us to reexamine how all of us do our work – changes in beliefs, role relationships, behaviors, and attitudes – and our culture.

**Description.** The PMBP Curriculum Initiative involves the design, development and delivery of learning events in support of the PMBP, as well as the quick and economical implementation of this curriculum throughout the work force. A number of learning and support methods will be used. Methods include self-paced learning via CD-ROM and the Internet, small group discussions (SGDs), mentoring and coaching, classroom training, or a combination of these methods. The curriculum contains an Introduction and Tour Guide, and eight courses. The courses are: Why PMBP?; Teams and Me; Public Service and Me; The Organization, Teams, and Me; Quality and the Project Delivery Team; Working in the PDT; Success, the PDT, and Me; and Your Call to Action.

**PROJECT SCHEDULING (NAS)**

**80**                      **Length: 36 Hours**                      **46NWA01A**  
**CEUs: 2.9**                      **PDHs: 29**                      **Tuition: \$920.00**

**Purpose.** The Corps of Engineers manages many projects in project management, engineering, and construction that require scheduling. The scheduling technique that this course covers is useful on any complicated project with varied aspects and resources required. The course was primarily developed to introduce the concept of network scheduling to construction personnel, and it is so oriented in its examples. However, a half day session has been added to the course that utilizes a network based Project Management Plan (PMP) for Civil Works Management. While this class does not provide a hands-on application of specific scheduling software, the course provides an introduction and understanding of basic network scheduling and manual and computer analysis in both original schedules and progress updates in a variety of software packages.

**Description.** After completing the course, the student should be able (1) to prepare, review, analyze, and update network analysis systems, and (2) to make

practical use of the information derived from the system.

Through lectures and workshop sessions, the course covers logic development and basic diagramming techniques; analysis of diagram for starting and finishing times; development of a diagram for a construction project; utilization of a network diagram and update data for approval, control, and modification of a contract; determination of payment and progress; effects of strikes or stoppages, materials delivery, and adverse weather or other delays; and additions to the contract. Editing specifications for requirements of NAS in construction contracts and other uses of the system are also presented. ER 1-1-11 and EP 415-1-4 are used for reference.

**Prerequisites.** Nominees must be assigned (a) Occupational Series: Selected 0340, 0800, 0905, and 1100; (b) Grade: GS-09 or above. Students should have a current or projected assignment requiring knowledge of network analysis as a management technique. Prior knowledge of a network system is not required. This course is highly desirable for Corps division and district engineers and for division, branch, and section heads of construction, operations, and engineering divisions, area engineers, resident engineers, project engineers, office engineers, other quality assurance representatives, project and/or technical managers, and trial attorneys.

<u>Session</u>	<u>Location</u>	<u>Date</u>
2005-1	Phoenix, AZ	12/06/2004 12/10/2004
2005-2	Tampa, FL	03/14/2005 03/18/2005
2005-3	Huntsville, AL	05/02/2005 05/06/2005

**PROJECT TEAMBUILDING**

**383**                      **Length: 36 Hours**                      **15PTL01A**  
**Tuition: \$3,040.00**

**Purpose.** This course is designed to prepare project managers to deal more effectively with the difficult and demanding tasks of managing organizational and people problems. These challenges are natural in project management and have far greater influence on project success than do the tools and techniques such as PERT, work breakdown schedules, earned value controls, etc.

**Description.** The course will focus on four major objectives: (1) Understanding the reality of the project manager's job. This includes profiling the successful project manager and learning how to start and lead project teams; (2) Developing the capability to succeed in project environments. This objective covers understanding different project structures and advantages and disadvantages of each. Learning to develop networks to gain influence over important decisions; (3) Understanding and developing critical personal and interpersonal skills. A few topics covered under this objective are; receiving feedback in their leadership decision making style, practicing conflict resolution

methods, developing methods to better manage relationships with customers, peers and bosses; (4) Developing a workable philosophy of project planning and control. This includes exploring classic project planning and control issues, understanding the meaning of Eisenhower's dictum "Planning is everything, plans are nothing" and learning that control systems provide signals, not solutions.

Objectives are taught by lectures combined with case studies, small group exercises and other interactive methods to provide maximum exchange of ideas and information.

**Prerequisites.** Students should be project managers with 2 or more years experience in project management in grades of GS-12 and GS-13.

<u>Session</u>	<u>Location</u>	<u>Date</u>
2005-1	Knoxville, TN	02/14/2005 02/18/2005
2005-2	Knoxville, TN	06/06/2005 06/10/2005

**PUBLIC INVOLVEMENT - COMMUNICATION**

**91**                              **Length: 36 Hours**                              **53PIC01A**  
**Tuition: \$1,040.00**

**Purpose.** This course is for staff whose responsibilities require communicating with the public about agency activities. The purpose of the course is to present the rationale for public involvement in Corps of Engineers activities and to present basic communications and group process techniques to enable Corps employees to more effectively interact with the public.

**Description.** The course utilizes team workshops, lectures, and case studies to present and demonstrate the utility of a wide-range of formats, techniques, and methods for public involvement. Topics covered in this course are: the public's role in decision-making; applying public involvement in Corps of Engineers activities; defining agency value systems; distinguishing policy (political) from technical decisions; designing a public involvement program; facilitation and small group leadership skills; listening and sending skills; designing public meetings and workshops; the role of values in public involvement; and dealing with conflict.

**Prerequisites.** Nominees should be assigned (a) Occupational Series: selected 0100, 0020, 0021, 0023, 0025, 0026, 0300, 0400, 0800, 1000 and 1300; (b) Grade: GS-05 through GS-11 (water resources planners, study managers, project managers, rangers, park managers etc) - anyone potentially involved with public involvement during the planning, design, construction or operation of a project.

<u>Session</u>	<u>Location</u>	<u>Date</u>
2005-1	Huntsville, AL	06/18/2005 06/22/2005

**PURCHASING GREEN**

**954**                      **Length: 8 Hours**  
**Tuition:\$500.00**

**PURPOSE.** This class provides engineers, specification writers, contract administrators, and environmental personnel instruction on incorporating green purchasing into government contracting and meeting the requirements of mandatory Federal procurement preference programs.

**DESCRIPTION.** The course covers the regulatory background for the mandatory Federal procurement preference programs (RCRA, Executive Orders, Federal Acquisition Regulations); EPA RCRA Inspections - what they will be looking for and how you can be ready; how to incorporate green purchasing into contracts - including a detailed discussion of the Federal Acquisition Regulations and the required contract clauses, finding example contract language, developing specifications to promote green purchasing; Comprehensive Procurement Guidelines (CPGs) and Recommended Recovered Material Advisory Notices (RMANs) - the 54 products Federal agencies are required to buy with recycled content; the mandatory biobased purchasing program and the proposed products list; where to find and how to order recycled-content and other green products; reporting and tracking of green purchases - what is currently being reported, using the DD 350, proposed reporting requirements, who needs to keep track of purchases and how; Environmentally Preferable Purchasing - discussion of other environmentally friendly attributes such as energy savings, water conservation, less packaging, reduction of hazardous content, and more. The classroom instruction includes lecture and slides, a group exercise, and a display of sample products. The instructors have taught green purchasing classes at over 50 military installations over the past 4 years and are winners of the 2001 White House Closing the Circle Award.

**PREREQUISITES.** It is recommended that nominees be military or civilian employees that have some role in the contracting process such as specification writer, contracting officer, or contracting officer's representative. Personnel in environmental positions that have involvement in Environmental Management Systems, pollution prevention, or green purchasing would also benefit.

<u>Session</u>	<u>Location</u>	<u>Date</u>
2005-1	Huntsville, AL	10/05/2004 10/05/2004
2005-2	Huntsville, AL	01/04/2005 01/04/2005
2005-3	Huntsville, AL	04/05/2005 04/05/2005
2005-4	Huntsville, AL	07/05/2005 07/05/2005

**QAE/PI**

**978**                      **Length: 32 Hours**                      **54QAE01A**

**Purpose.** Develop queries and reports to obtain and analyze data for process improvements. Course is

needed to show business area managers how IFS can assist them in their business practices.

**Description.** Topics that will be covered in this course are: Customer Service, Job Cost Accounting, Real Property Accountability, Planning, Data Verification, Backlog, work distribution, grouping tasks for efficiency, customer reimbursement, response times met, Benchmarking, interpreting and analyzing data.

**Prerequisites.** Course is for Supervisors, Facility Managers & (Assistants), Management Analysts, Budget Analysts, Planners and Schedulers, Industrial Engineers at the GS-7 level or higher. Prerequisites: SQL FOR IFS.

**RAD WASTE TRANSPORT/DOT RECERTIFICATION**

**430**                      **Length: 16 Hours**                      **56RTD01A**  
**Tuition: \$580.00**

**Purpose.** This 16-hour course provides recurrent training regarding the regulatory requirements of the Hazardous Materials Transportation Act (HMTA) and the Resource Conservation and Recovery Act (RCRA) as it applies to the generation, transportation and disposal of hazardous waste and Class 7 and 9 radionuclides. It enables employers to certify as required in 49 CFR 172 Subpart H, that their employees have been trained and tested in general awareness and function-specific elements as described below. In addition, this is a DoD approved course as per DoD 4500.9-R, Oct 99. (Note: Certain RCRA and safety related training elements required by 49 CFR 172 Subpart H and 40 CFR 265.16 are typically site-specific and must be performed on the job.)

**Description.** Training topics cover the identification and classification of hazardous wastes for purposes of preparing a hazardous waste manifest and fulfilling the DOT requirements for shipping hazardous wastes and radioactively contaminated wastes. Specifically, training topics include RCRA waste classification, land disposal restrictions and notification, manifesting requirements, identification of a DOT Reportable Quantity, use of the Hazardous Materials Table, DOT requirements for determining a shipping name, properly packaging, labeling, marking and placarding, and DOT emergency response requirements. In addition, the course addresses special EPA and DOT requirements for shipping asbestos and PCBs, and the specific DOT requirements associated with shipping Class 7 materials. (A scientific calculator must be brought to class.)

**Prerequisites.** This course is primarily targeted at persons in the following series: 0820, 0809, 0810, 0819, 0028, 0029, 0025, 0026, 0401, 1350, 1301, 0893, 0830, 1306, and 1320. (All series involved with environmental programs, including all engineers, chemists, industrial hygienists, health physicists, biologists, geologists, hydrogeologists, program managers, planners, etc.) The training is designated for persons with any of the

following job responsibilities: identification of proper shipping names for hazardous and/or radioactive wastes in accordance with DOT regulations; selection of appropriate packagings, markings, labels and placards in accordance with DOT regulations; RCRA waste identification and classification; completion or review of hazardous waste manifests and/or land disposal restriction notifications; preparation of shipping documents for radioactive waste, used oil, asbestos and PCBs; shipping of analytical samples; loading or unloading of radioactive or hazardous wastes; and transportation of hazardous materials in general.

<u>Session</u>	<u>Location</u>	<u>Date</u>
2005-1	Las Vegas, NV	03/17/2005 03/18/2005
2005-2	Orlando, FL	06/29/2005 06/30/2005

**RADIOACTIVE WASTE TRANSPORT**

**441**                      **Length: 24 Hours**                      **56RWP01A**  
**Tuition: \$960.00**

**Purpose.** This workshop provides initial training regarding the regulatory requirements of the Hazardous Materials Transportation Act (HMTA) as it applies to the offsite transportation of Class 7 and Class 9 Radioactive Wastes for recycling, treatment and/or disposal. It enables employers to certify as required in 49 CFR 172 Subpart H, that their employees have been trained and tested in general awareness and function-specific elements as described below. In addition, this is a DoD approved course as per DoD 4500.9-R, Oct 99. (Note: Certain safety related training elements required by 49 CFR 172 Subpart H are site-specific and must be performed on the job.)

**Description.** This workshop is designed to instruct the student on the Department of Transportation (DOT) requirements pertaining specifically to radioactive wastes, in particular, remediation wastes from radioactive sites such as FUSRAP sites, EPA Superfund sites, and military installations. This workshop is focused on the DOT regulations associated with Class 7 and Class 9 radionuclides which includes ongoing DOT/NRC rulemaking for harmonization with international transportation regulations. Course contents include, but are not limited to, determining if the material meets a Class 7 or Class 9 hazard class, DOT subtyping (Excepted, Type A, Type B, HRCQ, LSA, SCO etc), determining the proper shipping names, markings, labeling, and packaging, determining the correct shipping paper requirements, and security awareness training. There is minor discussion on the Nuclear Regulatory Commission (NRC) regulations as they relate to transportation. (Note: A scientific calculator must be brought to class. A worksheet on scientific notation and International System of Units (SI) conversions for radiological units of measure will be sent before the class to be completed prior to arriving for workshop.)

**Prerequisites.** This course is primarily targeted at persons in the following series: 0820, 0809, 0810, 0819, 0028, 0029, 0025, 0026, 0401, 1350, 1301, 0893,

0830, 1306, and 1320. (All series involved with environmental programs, including all engineers, chemists, industrial hygienists, health physicists, biologists, geologists, hydrogeologists, program managers, planners, etc.) The training is designated for persons who may be overseeing, arranging, or managing the offsite transportation of Class 7 or Class 9 radioactive wastes, or shipments of analytical samples from radioactively contaminated sites to laboratories. In addition, students are advised that an extremely helpful course would be the Hazardous Waste Manifesting/DOT Certification PROSPECT Course #223. This is not a required prerequisite. Students should be advised that Course #223 must be taken if certification is required for hazardous materials or wastes other than Class 7 (e.g. mixed wastes, friable asbestos).

<u>Session</u>	<u>Location</u>	<u>Date</u>
2005-1	Omaha, NE	04/26/2005 04/28/2005

**RE ACQUISITION 101**

**79**                                      **Length: 36 Hours**                                      **49REA01A**  
**CEUs: 3.0**                                      **Tuition: \$1,320.00**

**Purpose.** The real estate acquisition mission of the Department of The Army has no counterpart in the private sector. The laws, regulations, and policies pertaining thereto are peculiar to acquisition of real estate by the Federal Government or in conjunction with Federal projects. This course provides a basic overview of the land acquisition policies, procedures and regulations for Army and Corps of Engineers projects.

**Description.** The course includes lectures, class discussions, problem solving, and testing. Topics for presentation address (a) project planning, documents, and authorities, (b) elementary mapping and legal descriptions, (c) title evidence, (d) just compensation, (e) condemnation, (f) general fundamentals of appraisals for land acquisition, (g) interest and estates in land, (h) local cooperation and cost-sharing, (i) environmental considerations, (j) negotiation skills, and (k) crediting for land provided by project sponsors. After completion of this course, the student should have a foundation upon which, with additional study and experience, a knowledge base in real estate acquisition can be built.

**Prerequisites.** Nominees must be assigned (a) Occupational Series: 0318, 0905, 1101, 1170, and 1171; (b) Grade: GS-07 through GS-11; (c) personnel primarily assigned to real estate functions within the Corps of Engineers. Individuals outside prerequisite occupational series and grade and those actively engaged in real estate activities (such as planners, project managers, and installation DPW staff) will be considered on a space available basis. Nominees should have a general understanding of the Corps of Engineers organizational structure and have read the Real Estate Handbook, ER 405-1-12, Chapter 2, 5, and 12.

<u>Session</u>	<u>Location</u>	<u>Date</u>
2005-1	Chicago, IL	04/11/2005 04/15/2005

**RE ACQUISITION 201**

**121**                      **Length: 28 Hours**                      **49RA201A**  
**Tuition: \$1,180.00**

**Purpose.** The real estate acquisition mission of the Department of The Army has no counterpart in the private sector. The laws, regulations, and policies pertaining thereto are peculiar to acquisition of real estate by the Federal Government or in conjunction with Federal projects. This course provides an advanced overview of the land acquisition policies, procedures and regulations for Corps of Engineers Civil Works water resources projects.

**Description.** The course includes lectures, class discussions, problem solving, and testing. Topics for presentation address (a) preparation of real estate plans, (b) just compensation, (c) estates in land, including non-standard estates, (d) environmental considerations, (e) Continuing Authority Program (CAP) issues, (f) crediting for land provided by project sponsors, (g) utility and public facility relocations and, (h) Project Cooperation Agreements (PCA) principles.

**Prerequisites.** Nominees must be assigned (a) Occupational Series: 0318, 0905, 1170, and 1171; (b) Grade: GS-11 and above; (c) personnel primarily assigned to real estate planning or acquisition functions for Corps of Engineers Civil Works projects. Individuals must have completed RE Acquisition 101, Course No. 079, 49REA01A, or have equivalent experience or training from another source. Individuals outside prerequisite occupational series and grade and those actively engaged in real estate activities (such as planners and project managers) will be considered on a space available basis. Nominees should have an advanced understanding of the Corps of Engineers organizational structure and have read the Real Estate Handbook, ER 405-1-12, Chapters 4, 5, 12 and 17.

<u>Session</u>	<u>Location</u>	<u>Date</u>
2005 -1	Tampa, FL	04/26/2005 04/29/2005

**RE INLEASING**

**102**                      **Length: 36 Hours**                      **49RAL01A**  
**CEUs: 3.0**    **Tuition: \$1,140.00**

**Purpose.** The inleasing mission of the Department of The Army involves acquiring buildings, building space, residential quarters, recruiting stations, and other real estate required for military purposes. Emphasis of this course will be on recruiting stations, being the largest volume of inleasing actions performed by the Corps of Engineers. This course provides the student with the opportunity to become familiar with the basic appraisal procedures used in market rental studies and gives them a basic overview of the inleasing authorities, policies, procedures and regulations for the Corps of Engineers mission.

**Description.** The course includes lectures, class discussions, practice exercises, a field trip, and testing. Topics for presentation address (a) project planning, documents, and leasehold authorities, (b) general fundamentals of determinations of value for inleasing acquisition, (d) leasehold estates and forms, including mandatory and optional clauses, (e) use of automated Real Estate information systems, (f) lease negotiation skills, and (g) lease administration and support services contracts. After completion of this course, the student should have a foundation in inleasing acquisition. Additional study and experience will still be needed to become an experienced inlease professional.

**Prerequisites.** Nominees must be assigned (a) Occupational Series: 0905, 1170, 1171; and other series upon approval (b) Grade: GS-05 and above; (c) personnel primarily assigned to real estate functions within the Corps of Engineers. Individuals outside prerequisite occupational series and grade and those actively engaged in real estate activities (such as recruiters and project managers) will be considered on a space available basis. Nominees should have a general understanding of the Corps of Engineers organizational structure and have read the Real Estate Handbook, ER 405-1-12, Chapters 2, 4 and 5.

<u>Session</u>	<u>Location</u>	<u>Date</u>
2005-1	Tampa, FL	04/25/2005 04/29/2005

**RE MGT AND DISPOSAL 101**

**7**    **Length: 36 Hours**                      **49RED01A**  
**Tuition: \$1,160.00**

**Purpose.** The real estate management and disposal mission of the Department of The Army has no counterpart in the private sector. The laws, regulations, and policies pertaining thereto are primarily peculiar to the Federal Government. This course provides a basic overview of the Outgrant and Disposal policies, procedures and regulations for Army and Corps of Engineers projects, with emphasis on routine actions that use standard formats, such as licenses and building disposal.

**Description.** The course includes lectures, class discussions, problem solving, and testing. Topics for presentation address (a) authorities, documents, and procedures for placing property in excess status or to approve disposal; for GSA disposal, agency disposal, or special authority disposal, (b) disposal document preparation, (c) authorities, documents, and procedures for making property available for use by others, (d) routine outgrant document preparation, (i) outgrant management and administration, (j) environmental considerations, and (k) negotiation skills. After completion of this course, the student should have a foundation upon which to begin work on routine actions and, with additional study and experience, advance to more advanced real estate management and disposal actions.

**Prerequisites.** Nominees must be assigned (a) Occupational Series: 0905, 1101, 1170, and 1171; (b) Grade: GS-05 through GS-11; (c) personnel primarily assigned to real estate functions within the Corps of Engineers. Individuals outside prerequisite occupational series and grade and those actively engaged in real estate activities (such as natural resource specialist, outdoor recreation planners, park managers, project managers, master planners, and installation DPW staff) will be considered on a space available basis. Nominees should have a general understanding of the Corps of Engineers organizational structure and have read the Real Estate Handbook, ER405-1-12, Chapters 8 and 11.

<u>Session</u>	<u>Location</u>	<u>Date</u>
2005-1	New Orleans, LA	04/18/2005 04/22/2005

**RE MGT AND DISPOSAL 201**

**73**                      **Length: 28 Hours**                      **49RMD01A**  
**Tuition: \$1,130.00**

**Purpose.** The real estate management and disposal mission of the Department of The Army has no counterpart in the private sector. The laws, regulations, and policies pertaining thereto are primarily peculiar to the Federal Government. This course provides an advanced overview of the Management and Disposal mission, policies, procedures and regulations for Army and Corps of Engineers projects, with emphasis on complex actions, such as commercial concessions and early transfer disposals.

**Description.** The course includes lectures, class discussions, problem solving, and testing. Topics for presentation address (a) authorities, documents, and procedures for complex disposals, (b) working with GSA on disposals, (c) management of title, encroachments and boundary disputes, (d) real estate claims, (e) environmental land use controls, compliance and documentation, (f) authorities, documents, and procedures for making property available for use by others, (g) complex outgrant document preparation, (h) outgrant management and administration, (i) jurisdiction and annexation, and (j) negotiation skills. After completion of this course, the student should have advanced to more advanced real estate management and disposal actions, although additional study and experience will be required.

**Prerequisites.** Nominees must be assigned (a) Occupational Series: 0905, 1170, and 1171; (b) Grade: GS-11 and above; (c) personnel primarily assigned to real estate management and disposal functions within the Corps of Engineers. Individuals must have completed RE Mgt and Disposal 101, Course No. 007, 49RED01A, or have equivalent experience or training from another source. Individuals outside prerequisite occupational series and grade and those actively engaged in real estate activities (such as natural resource specialist, outdoor recreation planners, park managers, project managers, master planners, and installation DPW staff) will be considered on a space available basis. Nomi-

nees should have an advanced understanding of The Army and the Corps of Engineers organizational structure and have read the Real Estate Handbook, ER 405-1-12, Chapters 8 and 11.

<u>Session</u>	<u>Location</u>	<u>Date</u>
2005-1	Philadelphia, PA	05/03/2005 05/06/2005

**RE PMBP & CONTROL**

**144**                      **Length: 28 Hours**                      **49RPC01A**  
**Tuition: \$1,140.00**

**Purpose.** The real estate planning and control (P&C) function of the Corps of Engineers, Real Estate elements comprises a myriad of duties and responsibilities. This course provides a basic overview of the planning and control policies, procedures and regulations for Corps of Engineers mission support. The course outlines how P&C interfaces with other elements of the Corps and addresses broad aspects of the fiscal, manpower, planning, and real estate management information systems within real estate, Corps of Engineers, and the Army.

**Description.** The course includes lectures, class discussions, problem solving, and testing. Topics for presentation address (a) real estate planning, budgeting, and manpower, (b) real estate surveying, land descriptions, (c) real estate audits and records management, (d) real estate accountability and Chief Financial Officer Act issues, (e) authorities, documents, and procedures, (f) real estate aspects of Life Cycle Project Management, and (g) use of automated Real Estate information systems and their interaction with other Army and Corps systems. After completion of this course, the student should have a foundation upon which to begin work on routine actions and, with additional study and experience, advance to more advanced real estate P&C actions.

**Prerequisites.** Nominees must be assigned (a) Grade: GS-05 and above and (b) personnel primarily assigned to real estate functions within the Corps of Engineers. Individuals outside prerequisite grade and those actively engaged in real estate activities (such as natural resource specialist, outdoor recreation planners, park managers, project managers, master planners, and installation DPW staff) will be considered on a space available basis. Nominees should have a general understanding of the Corps of Engineers organizational structure and have read the Real Estate Handbook, ER 405-1-12, Chapters 2, 3, 13, 14 and 15.

<u>Session</u>	<u>Location</u>	<u>Date</u>
2005-1	New Orleans, LA	04/18/2005 04/21/2005

 **RE TRAINING**

**724**                      **Length: 40 Hours**                      **49RET01A**  
**Tuition: \$125.00**

**Purpose.** This course trains Corps real estate personnel who already know civil policies, procedures, functions, and forms for basic operations in civil works acquisition how to perform military realty functions. The exportable training course provides the trainee with instruction in various areas of military real estate activities.

**Description.** Training is presented in 14 modules of instruction covering the following topics: (a) Real Estate and Mobilization; (b) Authorities and Policies; (c) Development and Approval of Requirements; (d) Planning, Analysis, and Programming; (e) Approvals and Clearances; (f) Direct Purchase of Permanent Interests; (g) Leasing of Real Property; (h) Miscellaneous Interests; (i) Condemnation; (j) Relocation Assistance Services; (k) Relocation, Alteration, Vacation, or Abandonment of Highways, Roads, Railroads, Utilities, and Cemeteries; (l) Functions of the Management and Disposal Division; (m) Functions of the Programs Division; and (n) Planning for Future Mobilization. These modules are further divided into 31 submodules.

This exportable training course has two ½" videocassettes, a Facilitator's Guide designed to assist the facilitator in leading the training, Student Study Guides containing job performance aids, task-active exercises for "hands-on" experiences, sample forms, references, and an acronym list. Training encompasses approximately 2.5 hours of video instruction broken into training segments of 5-15 minutes. Total training requires approximately 40 hours of interaction between the students and the facilitator.

Potential Students. This course is designed primarily for realty specialists. However, the instruction is beneficial for supervisors and other Corps realty employees.

**REAL PROPERTY MANAGEMENT**

**286**                      **Length: 30 Hours**                      **49RPM01A**  
**CEUs: 2.9**                      **Tuition: \$1,200.00**

**Purpose.** This course is designed as an introduction to Army Military Real Property Management, as well as a means of providing Army Military Real Property personnel up-to-date information on changes and issues relating to the responsibilities, regulations, policies, and procedures of Army Military Real Property Management from an installation and HQDA perspective. The objective of the course is to provide an overall understanding for the new Army military real property person and also to enhance the experienced real property person's knowledge of the functions of Army Military Real Property Management.

**Description.** This course provides the most up-to-date information on the very broad range of Army military real property management responsibilities at the installation level and HQDA requirements through lectures, case studies, group interaction and practical exercises. This course will provide the most current information on Army military real property accountability, to include requirements of the Chief Financial Officers Act for Real Property Accountability and Reporting, space utilization, acquisition, disposals, outgrants, natural and cultural resource requirements, and environmental documentation, the McKinney Homeless Assistance Program, annexation, jurisdiction, encroachments, privatization, and automated management systems associated with Army military real property management and accountability.

**Prerequisites.** Nominees should include personnel both directly and indirectly associated with the management of Army real property at the installation, MACOM, MSC, USAR, RSC, USACE divisions/districts, and supporting contractors.

<u>Session</u>	<u>Location</u>	<u>Date</u>
2005-1	Huntsville, AL	05/09/2005 05/13/2005
2005-2	Western	TBD

**REAL PROPERTY SKILLS**

**150**                      **Length: 32 Hours**                      **46RPS01A**  
**Tuition: \$1,200.00**

**Purpose.** This course provides basic skills for Army Military Real Property clerks, specialists, and officers on the use of the Army Military real property automated system module of the Integrated Facilities System (IFS) and the basic knowledge of Army Military Real Property.

**Description.** This course covers the preparation and acceptance of the DD Form 1354 and DA Form 337; also through lectures and hands-on computer exercises the course covers the process and procedures for the accounting of Army Military Real Property, management of Real Property/Real Estate and data input and use of IFS used to maintain the of Army Military Real Property. The course will provide for the most recent updates in the procedures and input of the Army Military Real Property Inventory and accountability.

**Prerequisites.** Attendees should be engaged in the accountability and management of Army Military Real Property/Real Estate. Participation requires the fundamental knowledge of Army Military Real Property/Real Estate and the automated system, IFS used to maintain the Army Military Real Property Inventory.

<u>Session</u>	<u>Location</u>	<u>Date</u>
2005-1	Huntsville, AL	02/15/2005 02/18/2005
2005-2	Huntsville, AL	09/13/2005 09/16/2005



**REGULATORY III**

**325**                      **Length: 32 Hours**                      **35GR301A**  
**CEUs: 2.9**                      **PDHs: 29**                      **Tuition: \$1,200.00**

**Purpose.** This course prepares regulatory project managers for their role in enforcing the regulatory authorities provided by the Clean Water Act, Rivers and Harbors Act and the Marine Protection Research and Sanctuaries Act. It is also designed to prepare regulatory Program Managers for assigning and managing enforcement actions. This includes both unauthorized and compliance actions.

**Description.** This course covers statutory authorities, violations, enforcement and compliance, conducting investigations, collecting evidence, civil litigation, developing enforceable conditions and mitigation plans, criminal enforcement, civil and administrative penalties, as well as administrative resolution strategies and interagency cooperation. This course uses real world cases and exercises to translate regulatory laws, regulations and policies into practice. It prepares Counsel and Regulator alike for dealing with violators and U.S. Attorneys to ensure compliance with regulatory requirements and policies.

**Prerequisites.** All Corps Regulatory Project Managers, Program Managers, and Counsel, in grade level GS-07 through GM/GS-15 whose duties require them to evaluate and manage regulatory program actions.

**Notes.** A portion of each course will attempt to capitalize on student experiences by asking students to come prepared to discuss with the class one of their personal enforcement experiences or one of their districts enforcement experiences (case example). The case examples should be typed (1 page double spaced) and turned in at the beginning of the class.

<u>Session</u>	<u>Location</u>	<u>Date</u>
2005-1	Phoenix, AZ	02/07/2005 02/10/2005
2005-2	Cincinnati, OH	06/20/2005 06/23/2005

**REGULATORY IV**

**140**                      **Length: 36 Hours**                      **35RG401A**  
**Tuition: \$1,790.00**

**Purpose.** Regulatory IV is an interagency course in wetland delineation based on the current Federal Wetland delineation manual. It provides the student with a basic understanding of the interaction of vegetation, soils, and hydrology in wetlands in sufficient detail to apply delineation methods on routine cases. Upon completion, successful graduates will possess the background necessary to identify wetlands and determine their boundaries for purposes of administering programs such as the Section 404 Regulatory Program. Successful completion is determined by attendance and participation in all lecture, field, and laboratory sessions.

**Description.** Topics include (a) wetland characteristics (including soils, hydrology, and vegetation); (b) wetland delineation methods; and (c) field exercises in recognition of wetland boundaries.

**Prerequisites.** Agency personnel of the Corps, EPA, NRCS and FWS who are involved in the delineation of wetlands will be assigned Priority 1. Other federal, state, local and tribal entities and their agency employees can benefit from the course on a priority 2 and 3 basis. Appropriate field clothes are required.

**Notes.** This course contains requirements which are mandatory for course completion and may require an estimated 8 hours of overtime. It is your responsibility to bring this to the attention of your supervisor so that an overtime request can be made by your appropriate personnel. It is also your responsibility to certify the amount of time expended on these requirements to your supervisor when you request overtime compensation.

<u>Session</u>	<u>Location</u>	<u>Date</u>
2005-1	Mobile, AL	04/04/2005 04/08/2005

**REGULATORY V**

**137**                      **Length: 36 Hours**                      **35RG501A**  
**Tuition: \$2,240.00**

**Purpose.** Regulatory V is an interagency course designed for employees of federal agencies involved in assessing wetland functions in the field. The objective of the course will be to ensure students are as proficient as possible in applying regional subclass models and in evaluating their results. The course will focus on the application of models under different scenarios such as impact assessment, alternative analysis, and mitigation design/monitoring associated with implementation of regulatory programs such as the Clean Water Act and the Food Securities Act. Successful completion of the course is determined by attendance and participation in all lecture, field, and laboratory sessions.

**Description.** Topics include overview of the Hydrogeomorphic Approach; developing Assessment Models and Regional Guidebooks; verifying, validating, and testing Assessment Models and Regional Guidebooks.

**Prerequisites.** Agency personnel of the Corps, EPA, NRCS, FWS, and FHWA who are involved in the evaluation of impacts associated with regulated or unauthorized activities in wetlands will be assigned Priority 1. Other Corps and outside agency employees can benefit from this course on a priority 2 or 3 basis. Appropriate field clothes are required.

**Notes.** This course contains requirements which are mandatory for course completion and may require an estimated 8 hours of overtime. It is your responsibility to bring this to the attention of your supervisor so that an overtime request can be made by your appropriate personnel. It is also your responsibility to certify the

amount of time expended on these requirements to your supervisor when you request overtime compensation.

<u>Session</u>	<u>Location</u>	<u>Date</u>
2005-1	Central Region	06/20/2005 06/24/2005

### REGULATORY VII

**436**                      **Length: 24 Hours**                      **35RG701A**

**Purpose.** The Regulatory program changes rapidly. New Laws enacted by Congress have significant impact on the program. This workshop provides a regular forum to discuss and incorporate these changes into the program.

**Description.** Many of the topics to be covered in this course are covered in other Regulatory courses. However, senior regulators are not able to attend all of these courses. Topics are subject to change as Congress shifts its focus but could include: Flexibility in Regulatory, Regulatory Takings, Administrative Appeals, Tribal Issues and Responsibilities, Environmental Protection, or other Regulatory matters subject to the influence of Congressional action.

**Prerequisites.** Regulatory Chiefs, Branch Chiefs, Senior Regulatory Team Leaders, Chief of Operations, or those individuals responsible for maintaining a viable Regulatory program. Individuals should have a minimum of 5 years of experience in the Regulatory program at the Grade Level of GS-09 or above.

### REMOTE SENSING FUNDAMENTALS

**196**                      **Length: 38 Hours**                      **35RSF01A**  
**Tuition: \$1,630.00**

**Purpose.** This is a lecture-lab demonstration course designed to provide an understanding of the fundamentals of remote sensing technology as it is applied to environmental phenomena. The course stresses the basics of remote sensing, including information about the nature of light and optics, the classical properties of electromagnetic waves and their interaction with matter, and a review of radiation heat transfer. The working principles of primary remote sensors are discussed and include an overview of sensors and sensor platforms. An introduction to weather and earth resources satellites is included. Photogrammetry is not included in this course.

**Description.** The course is broken down into three parts: (a) the first part deals with energy and matter relationships: (1) concept of force fields, (2) geometrical optics, (3) properties of electromagnetic waves, (4) review of black body radiation laws, and (5) energy-matter interaction and atmospheric interaction; (b) the second part deals with the technical aspects of the primary sensors in operation: (1) electro-optical systems (nonphotographic), (2) radar imagers, (3) passive microwave imagers, (4) infrared, visible, and ultraviolet imagers, and (5) thermal scanners; and (c) the third part

deals with the demonstration of data processing techniques, image interpretation, and techniques for optically enhancing, enlarging, and clarifying imagery. The demonstration of remote sensing applications covers: (1) land use, forestry, geography, geology, hydrology, meteorology, oceanography, etc.; (2) a general discussion with participants of COE mission areas for which remote sensing is relevant; and (3) discussion of entry of unprocessed and processed imagery into spatial data bases including a brief introduction to vector and raster concepts and conversion between them.

**Prerequisites.** Nominees must be assigned (a) Occupational Series: Selected 0400, 0800, and 1300; (b) Grade: GS-07 through 12. Nominees are, or will be, involved in the acquisition, interpretation, and application of remotely sensed data.

<u>Session</u>	<u>Location</u>	<u>Date</u>
2005-1	Hanover, NH	06/20/2005 06/24/2005

### RESERVOIR MODELING WITH HEC RES SIM

**98**                      **Length: 36 Hours**                      **35RSA01A**  
**Tuition: \$2,300.00**

**Purpose.** This course provides participants with a capability to perform reservoir system studies using computer simulation optimization routines to analyze reservoir system performance.

**Description.** Reservoir simulation for flood control, water supply, hydropower and multipurpose operation is covered. The new computer program, Reservoir Evaluation System (HEC-Res) will be used for reservoir simulation problems. An introduction to system optimization for flood control and conservation studies will also be presented. In addition to reservoir simulation by computer, the course covers topics related to developing flow data and system demands, plus formulating and evaluating alternative reservoir system configuration and operations strategies.

**Prerequisites.** Nominees must be assigned (a) Occupational Series: Selected 0800 and 1300; (b) Grade: GS-07 or above. A basic level of understanding is required in hydrology, hydraulics, and reservoir regulation. Three or more years of professional work experience in hydraulics and hydrology or in water resources planning with emphasis in hydrologic and hydraulic studies, meets this level of understanding. In addition, it is required that course participants be in positions where they will be involved in reservoir system studies within the next year or two.

<u>Session</u>	<u>Location</u>	<u>Date</u>
2005-1	Davis, CA	11/15/2004 11/19/2004

**RIPARIAN ZONE  
ECOLOGY/RESTORATION/MGT**

**281**                      **Length: 36 Hours**                      **33REM01A**  
**Tuition: \$2,300.00**

**Purpose.** This course addresses planning and management issues that pertain to riparian (streamside) ecosystems in a variety of ecological and geographical settings. Emphasis is placed on the ecology, restoration and stewardship of riparian habitats associated with Civil Works projects and activities. Students will receive instruction on the functions and ecological importance of riparian zones, conservation needs, potential impacts resulting from various land use practices, and restoration and management techniques that can be applied to maintain or improve riparian systems.

**Description.** Through a series of lectures, practical exercises, and field activities, students will be introduced to the following topics: (a) riparian classification (including regional variation); (b) riparian functions, values, and trends; (c) riparian ecology (fluvial geomorphology, vegetation, fauna; will include sessions on aquatic biology, threatened and endangered species, and the importance of riparian zones to neotropical migrant birds); (d) inventory and monitoring techniques; (e) impacts (hydrologic changes, vegetation modification, exotic species, agricultural practices, bank erosion, non-point source pollution); (f) restoration methods; and (g) management strategies (including development of appropriate designs for corridors and buffer strips). Field trips will be taken to several locations to examine riparian habitats and demonstrate inventory, restoration, and management techniques. Case studies will be presented on riparian issues at Civil Works projects and military installations.

**SUBJECTS AND LEARNING OBJECTIVES.** Students will be able to characterize riparian habitats, understand the functions and values of these habitats, and make the most appropriate decisions regarding their restoration, use, conservation, and management from an ecosystem perspective. Students will be taught state-of-the-science techniques and procedures for collecting, analyzing, and displaying ecological data needed to understand and manage riparian systems. Applicable laws, regulations, and agency policies will be reviewed. Students will be able to identify specific techniques and procedures for inventorying, assessing, analyzing, and evaluating the status of riparian resources and associated impacts upon these resources.

**Prerequisites.** Nominee assignments should be: (a) primarily technical personnel whose duties involve the identification, evaluation, analysis, protection or management of ecological resources. Project and Program Managers responsible for project and program management activities, particularly those involving ecosystem restoration, would also benefit; (b) Occupational series: 0020's, 0150, 0185, 0190, 0198, 0400's, 0800's, 1023, 1350 to include physical scientists, environmen-

tal protection specialists, and hydraulicists; and (c) Grade: GS-09 or above. Disciplines (other than the above) may be accepted provided nominee's present or anticipated duties involve the management, analysis, identification, protection, or evaluation of ecological/natural resources.

**SPECIAL INSTRUCTIONS.** This course involves hands-on field exercises. Therefore, students should prepare to work in riparian and aquatic environments and should bring appropriate shoes and clothing.

**Notes.** This course contains requirements that are mandatory for course completion and may require an estimated 8 hours of overtime. It is your responsibility to bring this to the attention of your supervisor so that overtime request/determination can be made by your appropriate personnel. It is also your responsibility to certify the amount of time expended on these requirements to your supervisor when you request overtime compensation.

<u>Session</u>	<u>Location</u>	<u>Date</u>
2005-1	Louisville, KY	08/15/2005 08/19/2005

**RISK ANALYSIS-FLOOD DAMAGE  
REDUC PROJECT**

**209**                      **Length: 36 Hours**                      **33RBA01A**  
**CEUs: 2.6**                      **PDHs: 26**                      **Tuition: \$2,200.00**

**Purpose.** This course introduces Corps of Engineers field office staff to risk-based analysis for flood damage reduction projects. Participants will know the methodologies for determining uncertainty in discharge, stage, and damage and how to evaluate project size and performance accounting for the uncertainty in these parameters. Project function, safety, and workability are reviewed to increase awareness of how these issues affect the formulation of project features.

**Description.** The course presents current policy and technical procedures for conducting risk-based analysis of typical flood damage reduction projects such as levees, channels, and reservoirs. Included are lectures and case studies describing procedures for determining uncertainty in discharge-frequency, stage-discharge, and stage-damage relationships for various project site characteristics. Procedures for conducting Monte Carlo simulations for evaluating project reliability and size are described using current software developed for the personal computer. Concepts and procedures are demonstrated and practiced in classroom workshops. Current Corps policy related to risk-based analysis is also discussed. Project function focuses on typical features associated with riverine flood reduction projects. Performance evaluation includes setting levee grade, closure and overtopping strategies, and local operation, maintenance, rehabilitation, replacement, and repair task evaluation. Requirements for interior flood analysis are also presented. Examples and case studies illustrate potential problems and solutions.



RAM-D has the following objectives: a) To set forth a procedure for completing a threat assessment that determines the likelihood that an adversary will attack a critical asset to achieve a particular consequence and succeed in defeating the security system; b) To provide a procedure for completing a consequence assessment should an adversary be successful in disrupting, disabling, or destroying the missions of the entire dam project complex; c) To provide a systematic process for determining the effectiveness (or ineffectiveness) of the security protection system to prevent a successful attack against an operational component of the dam project; d) To provide the procedure for completing a risk assessment that allows the manager to evaluate the level of risk associated with the threat, consequences, and protective system and determine the needs for directing an implementation of security upgrades or plans for risk reduction, as appropriate for the characteristics of the subject dam.

**Prerequisites.** (a) This course is meant primarily for personnel involved in the physical security of dams. (b) Occupational series: 95B NCO (Military Police) with physical security experience; b) 31A Officer (Military Police) with physical security experience; c) Electronic and physical security officers, communication and technical officers; d) Electrical, civil, mechanical and security engineers involved in the physical security of dams; e) Civil Works Project Personnel. (c) Grades: GS and WG as appropriate.

Session	Location	Date
2005-1	TBD	

 **ROLLER COMP CONCRETE**

**749**                      **Length: 16 Hours**                      **35ERC01A**  
**Tuition: \$225.00**

This course is divided into two sections: one for mass and one for pavements. Each section has a video run time of approximately 1 hour each. Training credit of 16 hours should be given for each section.

**Purpose.** This course provides detailed information on the placement and verification of roller compacted concrete. Roller compacted concrete (RCC) is becoming very popular within the Corps of Engineers due to its economic and fast construction factors. This course provides the knowledge for the new technique.

**Description.** This course covers both RCC mass and RCC pavements. RCC mass is discussed in Modules 1-5. RCC pavement is discussed in Modules 6-10. Each section's video run time is approximately 1 hour each.

MASS-Modules: (1) QA Duties and Responsibilities; (2) Materials, Preparation, Test Section and Sampling and Testing; (3) Concrete Plant and Execution; (4) Design and Construction Considerations; and (5) Special Considerations.

PAVEMENTS - Modules: (6) QA Duties and Responsibilities; (7) Materials, Preparation, Test Section and Sampling and Testing; (8) Measuring, Mixing, and Transportation; (9) Joints; and (10) Weather and Safety.

**Prerequisites.** Nominees should be personnel who are interested in expanding their knowledge of roller compacted concrete placement, especially construction quality assurance personnel, engineering specifiers, and those responsible for maintenance, such as DEH personnel. Students should have completed the Construction Quality Management (classroom or exportable) course.

 **ROOFING TECHNOL**

**744**                      **Length: 24 Hours**                      **73RTA01A**  
**LUs: 14**                      **Tuition: \$225.00**

**Purpose.** This course provides an overview on all low-slope roofing systems. Students are presented a broad spectrum of both theoretical and practical aspects of design, specifications materials selection and compatibility, application workmanship, maintenance, repair, and quality assurance for various roofing systems.

**Description.** Training materials include one ½" videotape cassette, a Facilitator's Guide, and a Student Study Guide. Training is designed to be accomplished in 3 full days.

MODULES. The topics covered in this course are (a) Overview; (b) Structural Decks; (c) Roofing Drainage; (d) Vapor Retarders; (e) Insulation; (f) Built-Up Roofing; (g) Flashing; (h) Metal Roofs; (i) Protected Membranes; (j) Shingles; (k) Single-Ply Systems; (l) Forensic Problems; (m) Construction Conferences; (n) Construction Inspection; (o) General Maintenance Procedures; (p) Single-Ply Maintenance; (q) Maintenance of Built-Up Roofs; (r) Nondestructive Moisture Surveys; and (s) Factory Mutual and the Underwriters' Laboratory.

**Prerequisites.** This course is designed for personnel who are interested in expanding their knowledge of roofing systems, especially Construction Quality Assurance personnel, architects, engineers, specifiers, and persons responsible for maintenance. Students should have completed the Construction Quality Management (classroom or exportable) course.

 **S&H FOR HWS EXP 8-HR**

**766**                      **Length: 8 Hours**                      **58SHR01A**  
**Tuition: \$225.00**

This course provides participants with 8-hour safety and health refresher training as specified by the U.S. Occupational Safety and Health Administration's 29 CFR 1910.120 requirements.

**Purpose.** The course is designed for USACE team members involved in uncontrolled hazardous, toxic waste site operations under the Comprehensive Envi-

ronmental Response, Compensation and Liability Act (CERCLA), the Resource Conservation and Recovery Act (RCRA), Remedial Actions and the Defense Environmental Restoration Program (DERP) of Formerly Used Defense Sites (FUDS), and the Installation Restoration Program (IRP).

**Description.** Training materials include ½” videotape cassettes, a Facilitator's Guide, and a Student Study Guide. In accordance with OSHA, course topics include names of personnel and alternates responsible for site safety and health; safety and health hazards present on the site; use of personal protective equipment; work practices to minimize risks from hazards; medical surveillance requirements, safety and health programs; site-specific plans; decontamination procedures; emergency response plans; confined space entry procedures; and spill containment.

**Prerequisites.** (a) An initial 40-hour Safety and Health for Hazardous Waste Sites Course or other qualifying 40-hour safety and health course for uncontrolled hazardous waste sites meeting OSHA requirements 29 CFR 1910.120 and 29 CFR 1910.121. (b) Nominees should be team members directly involved in hazardous waste operations and management. (c) Persons responsible for the safety and health of Corps team members should have a degree in science or engineering and/or equivalent amount of relevant practical experience. (d) The course facilitator must have completed the Facilitator Training course.

**SA/DBA TRAINING COURSE**

**970**                      **Length: 32 Hours**                      **54SAD01A**

**Purpose.** The purpose of this course is for “Technical Support, Functional Support and technical and Functional Issues”.

**Description.** This course will teach “Discover tool-how to load, setup and use it; DPAS interface - what does SA.DBA need to know about interface; Security issues (firewalls), how to identify problems and correct problems before they occur”. There will be an overview of functions and how they tie together. TOPICS: Basic Ops System; Database Engineer; Network Principles, Security, Procedures; Troubleshooting Techniques (Detailed SA Training); WEB Base Technology and File Management.

**Prerequisites.** Nominees should be Systems Administrators and Data Base Administrators. Take Prerequisites: <http://www.armycbt.army.mil> Oracle8i Database Administration courses: 1Z0-023, 1Z0-024, 1Z0-025, 1Z0-026.

 **SAFE SELF**

**708**                      **Length: 4 Hours**                      **Tuition: N/C**

**Purpose.** This course will help Corps employees learn about tactical communications and conflict resolution. This course will help meet the annual tactical communication training requirements for Corps park rangers.

**Description.** This course is an interactive course that uses both web-based and CD-ROM technology to assist park rangers and other Corps personnel who meet the public daily. It is based on the concepts and techniques used in the internationally recognized communications-training program “Verbal Judo”, developed by Dr. George Thompson and the Verbal Judo Institute. The course consists of the following scenarios: Disruption of a Ranger Demonstration, Reservation Not on File, Campers Violating Quiet Hours, Visitor Confronts Office Assistant, Visitor Parked on Grass, Emergency Call Received by Volunteer, and Female Ranger accosted by Visitor.

**Prerequisites.** Park rangers and other Corps personnel who meet the public daily.

**SEAGRASS MIT/ECOL WS**

**424**                      **Length: 32 Hours**                      **33SME01A**

**Purpose.** To identify state-of-the science seagrass ecology and mitigation alternatives (restoration, enhancement, avoidance, minimization and development) through a series of lectures, practical field problem solving with field trips and highly facilitated discussions involving known experts in the field.

**Description.** This National workshop will focus on “lessons learned” approach to seagrass mitigation based upon linking the latest seagrass science/ecology to formulating mitigation alternatives from a project and program management perspective. Recent changes in the consideration of the avoidance approach to seagrass mitigation alternatives formulation and analysis based on the best available science and technology has resulted in new and innovative approaches to seagrass mitigation based upon National and regional perspectives (SEUSA and Western USA). Past and present peer and non-peer reviewed seagrass literature will be examined. Participants of the workshop will meet the known seagrass mitigation experts in highly facilitated lecture and field problem solving exercises. Case studies of successful and innovative seagrass mitigation work will be examined for application to the Pacific Northwest seagrass mitigation opportunities and challenges.

**Prerequisites.** Project or program management from planning, design, engineering, regulatory, navigation and environmental resources. Disciplines (other than the above) may be accepted provided the nominee's

present or anticipated duties involve the management, plan formulation, alternatives identification and analysis or regulation or seagrass resources.

Special Instructions: This is a field workshop which will involve "hand on" field exercises. Students should come prepared to work in the marine (salt water environment) and bring appropriate clothing, shoes and boots.

### SEDIMENT TRANSPORT IN RIVERS & RESERVOIRS

**122**                      **Length: 36 Hours**                      **35SDT01A**

**Purpose.** This course reviews the principles of open channel hydraulics and provides information on channel aggradation and degradation, sediment transport, and use of numerical models to predict stream behavior.

**Description.** The course prepares engineers to perform moveable boundary hydraulic studies using the computer program HEC-6 "Scour and Deposition in Rivers and Reservoirs." Topics include sediment characteristics and data gathering, sediment transport theories and equations, stream bed armoring, use and calibration of HEC-6 for prediction of stream bed profile changes, reservoir deposition, and maintenance dredging.

**Prerequisites.** Nominees must be assigned (a) Occupational Series: Selected 0800 and 1300; (b) Grade: GS-09 or above. The student should have a working knowledge of open channel hydraulics, particularly step-backwater calculations. Familiarity with HEC-2 input structure and format is also required. In addition, course participants must be in positions or anticipate being in positions where they will be involved in sediment studies within the next year or two.

### SEEPAGE AND PIPING

**250**                      **Length: 36 Hours**                      **35SEP01A**

**Purpose.** This course trains Corps of Engineers designers and field engineers for seepage analysis, control, field problems in dams, levees, retaining walls, and slopes. This course is for both young and experienced engineers. The course uses criteria in EM 1110-2-1901 and TM 5-818-5, supplemented by field experience.

**Description.** The course will cover the principles of seepage through soils, related problems with erosion and piping, and methods for preventing and mitigating these problems. Specific topics will include Darcy's law, permeability of soils, flow nets free surface problems, erosion and piping, filter criteria and remedial measures, and use of computer programs for design and analysis.

**Prerequisites.** Nominees must be assigned: (a) Occupational Series: Selected 0800; (b) Grade: GS-07 or

above; and (c) Others: Employed as soils engineer, geologist, construction engineers, or operation and maintenance engineers.

### SEISMIC DESIGN BUILDINGS

**27**                      **Length: 36 Hours**                      **35SDB01A**  
**Tuition: \$2,310.00**

**Purpose.** This course trains structural engineers who are not thoroughly familiar with seismic design. Seismic design technology and design procedures have advanced dramatically in recent years. The Corps seismic manuals have been rewritten to reflect these criteria. Unless our designers are trained in the new design they could be designing building that do not meet the new codes and standards. The Corps designs Army buildings that must meet the latest codes. At this time, the Corps manuals are the most updated materials available.

**Description.** Through lectures and testing, this course presents (a) introduction of seismic design; (b) seismic design criteria; (c) seismic design procedures; (d) structural elements of (including illustrative examples): (1) diaphragms, (2) walls, (3) frames, (4) masonry, (5) mechanical, electrical, and architectural elements, (6) utility systems; and (e) a one-half day field trip to a construction site/seismically designed building (if practicable). Students will be able to design/review seismic design analyses and drawings more efficiently upon completing this course. The manuals to be used are, TI 809-04, "Seismic Design for Buildings", TI 809-05, "Seismic Evaluation and Rehabilitation for Buildings" Corps Specifications addressing certain aspects of seismic issues and national codes and guidance referenced in the Corps documents.

**Prerequisites.** Nominees must be assigned and/or have all of the following: (a) Occupational Series: 0810 and 0830. Waivers must be submitted for other occupational series; (b) Grade: GS-07 or above. Course is open to Air Force and Navy personnel.

Session	Location	Date
2005-1	Champaign, IL	05/23/2005 05/27/2005

### SEISMIC STABILITY OF EARTH DAMS

**247**                      **Length: 36 Hours**                      **35SSE01A**

**Purpose.** This course provides Corps of Engineers personnel with the knowledge, skills, and abilities needed for assessing the seismic safety of the Corps dams and other earth structures with state-of-the-art analytical tools and procedures.

**Description.** Through a series of lectures, case studies, and laboratory demonstrations, students will introduced to the following topics: (a) earthquake ground motions; (b) site characterization; (c) site response analysis; (d) liquefaction evaluation; (e) slope stability and deformation; and (f) remediation alternatives.

**Prerequisites.** Nominees must be assigned: (a) Occupational series: 0810; and (b) Grade GS-09 and above.

**SHEAR STRENGTH**

**248 Length: 24 Hours 35SHS01A**

**Purpose.** This course provides geotechnical engineers with the background and knowledge of shear strengths required in stability analysis of embankment dams, levees, and slopes in open cuts or natural ground. Participants completing this course will be well prepared to select appropriate design shear strengths for various cases for which stability analyses shall be performed. This course compliments and enhances the training in dam safety.

**Description.** The course provides instruction in the following topics: (a) Shear strengths, concepts, failure envelopes, and failure criteria; (b) Shear strengths of cohesionless soils; (c) Shear strengths of cohesive soils: (1) Types of shear strengths (Q,R,R-bar, S strengths, and anisotropically consolidated shear strengths), test procedures, and plotting results; (2) Stress paths and interpretation; (3) Factors affecting tests and strengths; (d) Undrained strength tests and interpretation; and (e) Methods and cases of Corps slope stability analysis and related matters.

**Prerequisites.** Nominees must be assigned (a) Occupational Series: Selected 0800; and (b) Grade: GS-07 or above.

**SLOPE STABILITY ANALYSIS**

**282 Length: 36 Hours 35SSA01A Tuition: \$3,170.00**

**Purpose.** This course covers current information and analysis procedures contained in the Corps' newly updated EM 11102-1902 which was published in FY03. The lecture covers basic principals and methods of slope stability analysis including shear strength and the old Corps and Duncan-Wright procedures for rapid drawdown. The lecture is intended for design engineers, technical specialists and independent technical reviewers involved in all aspects of slope stability.

**Description.** The course will cover the following topics: (a) review of soil shear strength; (b) slope stability theories and analysis procedures; (c) design conditions and design criteria; (d) computational methods, including slope stability charts and computer programs; and special analysis procedures for sudden drawdown. Both hand and computer calculations will be used to illustrate the various analysis procedures for selected problems.

**Prerequisites.** Civil engineers, GS-7 and above. Nominees should have a pre-knowledge of shear strength of soils.

Session	Location	Date
2005-1	Huntsville, AL	06/20/2005 06/24/2005

**SOIL STRUC INTERACTION**

**113 Length: 36 Hours 35SSI01A Tuition: \$2,450.00**

**Purpose.** This course trains Corps of Engineers civil engineers to use soil structure interaction analyses for strip footings, mat foundations, single piles, sheet pile walls, and reinforced concrete structures.

**Description.** The course covers the fundamentals of soil-structure interaction (SSI) analyses and their application to Corps-type problems. Finite difference and finite element computer programs available for the soil-structure interaction analysis are explained. Both 1-D and 2-D problems are covered. Examples of Corps-type problems are solved using SSI techniques. Workshop sessions provide the participants an opportunity to use computer programs that utilize SSI techniques. The new PC based SSI computer program will be demonstrated. After completing this course students will be able to complete difficult designs using computer solutions to soil structure displacement problems.

**Prerequisites.** Nominee must be assigned (a) Occupational Series: Selected 0800; (b) Grade: GS-07 or above. Nominees should be engineers involved in the design of structures and should have some experience in the use of personal computers.

Session	Location	Date
2005-1	Vicksburg, MS	03/28/2005 04/01/2005

**SPACE UTILIZATION**

**214 Length: 36 Hours 49SUM01A LUs: 25 Tuition: \$1,200.00**

**Purpose.** This course is designed for space utilization, master planning, real property management, and facilities management personnel. The course was developed to provide these personnel with the basic tenets of space utilization management within the U.S. Army. This course has two focuses: (1) to train managers, at all levels how to determine organizational space allowances and requirements, and to plan and conduct utilization surveys; and (2) to identify ways to increase efficiency through space planning techniques.

**Description.** This course includes lectures, discussions, and exercises, which teach students to recognize poorly used or planned facility and to make necessary adjustments. Space utilization will be adjusted through space allowance and requirements analysis of organizations and facilities on the installation. The second half of the course concentrates on improving space utilization by using space-planning techniques and by the use of systems furniture. Major topics include (a) Army facility asset database overview, (b) organizational space allowances and requirements, (c) planning and conducting a space utilization survey, (d) space planning principles, and (e) qualitative elements of space plan-





**Prerequisites.** Nominees must be assigned (a) Occupational Series: 0802, 0809, 0810; (b) Grade: GS-05 or above; (c) Other: Current or projected assignment as quality assurance personnel, technical or engineer, with verification responsibilities. Students should have completed the Construction Quality Management (classroom or exportable) course.

**SURVEY I: BASIC PRINCIPLES**

**295** Length: **36 Hours** **35SV101A**  
**CEUs: 3.0** PDHs: **30** Tuition: **\$1,510.00**

**Purpose.** This course provides surveyors, planners, designers, and CADD/GIS developers with a fundamental knowledge of basic conventional field surveying procedures and with the computational techniques needed to support civil works, military construction, and environmental restoration projects. It also supports USACE hydrographic, topographic, and real estate surveying activities. This course covers all basic surveying procedures typically required to support Corps design, construction, operations, and maintenance activities and supplements surveying knowledge required for A-E quality assurance. (Survey II: Construction, Course No. 339, is intended to be a follow-on to this course.)

**Description.** Specific topics covered in the course include surveying mathematical concepts; the rectangular coordinate system; angle and distance measurement; traverse surveys in support of engineering design and field construction stake out; traverse computations and balancing methods; field taping; trigonometric and differential leveling field procedures and note reduction; state plane coordinate systems; topographic surveying techniques; map accuracies; electronic total stations; land boundary surveys; and error analysis.

**Prerequisites.** Nominees should be assigned (a) selected positions in occupational series 1300 (Surveyors), 0800 (Engineers), 1100 (A-E Contract Administrators), 0400 (park rangers), and planners, designers, construction inspectors, and CADD/GIS developers involved with civil works, construction, and environmental restoration projects who require a basic understanding of survey procedures and computational techniques. Waivers will be considered. (b) Grade: GS-03 or above; (c) A general working knowledge of high-school-level algebra and trigonometry. and (d) A general working knowledge of scientific calculators for computing trigonometric functions and for converting degree-minute-second angular measurements to decimal equivalents.

**Notes.** Students should bring a hand-held, scientific-type calculator to class. Varying instrumentation and field procedures are utilized within USACE Districts; therefore, field exercises are not an integral part of this course. Field demonstration on the use of survey instruments is conducted during the course.

<u>Session</u>	<u>Location</u>	<u>Date</u>
2005-1	Huntsville, AL	05/02/2005 05/06/2005

**SURVEY II: CONSTRUCTION**

**339** Length: **28 Hours** **35SV201A**  
**CEUs: 2.1** PDHs: **21** Tuition: **\$1,600.00**

**Purpose.** This course provides participants with the fundamental techniques of construction surveying, as used in supporting Corps facility management, environmental restoration, military construction, real estate, navigation, dredging, and construction and operation activities.

**Description.** Specific topics covered in the course include the following:

- o Land area computations and partitioning of tracts.
- o Horizontal curve computations and stake out.
- o Vertical curve computations and stake out.
- o Topographic surveying and mapping using surveying instruments, transit, and electronic total station development techniques.
- o Construction surveying, including field practice.
- o Stake out, grading, etc.
- o Earthwork.
- o Map presentations.
- o State plane coordinates.
- o Construction control.
- o Pipe/tunnel construction.
- o Culvert and bridge survey layout.
- o Building construction layout.
- o Highway and street layout.
- o Structural deformation surveys of locks and dams.

**Prerequisites.** Nominees must be assigned to (a) selected positions in occupational series 0800 (engineers), 1300 (surveyors), 1100 (A-E contract administrators), planners, designers, construction inspectors, or CADD/GIS developers involved with civil works, construction, or environmental restoration projects who require an understanding of current construction surveying procedures, methods, and computational techniques. Waivers will be considered. (b) Grade: GS-04 or above; (c) The computations presented in this course will require an understanding of high-school-level algebra and trigonometry; and (d) A general working knowledge of a scientific-type, hand-held calculator in computing trigonometric functions and in converting degree-minute-second angular measurements to decimal equivalents.

**Notes.** Students should bring a hand-held, scientific-type calculator to class. Varying instrumentation and field procedures are utilized within USACE Districts; therefore, field exercises are not an integral part of this course. Demonstration on the use of survey instruments is conducted during the course. This course is intended to be a follow-up of Course #295 Survey I: Basic Principles.

<u>Session</u>	<u>Location</u>	<u>Date</u>
2005-1	Huntsville, AL	07/12/2005 07/15/2005

**SURVEY III: MAPPING**

**296**                      **Length: 36 Hours**                      **35SV301A**  
**CEUs: 2.7**                      **PDHs: 27**                      **Tuition: \$2,000.00**

**Purpose.** This course provides engineers, cartographers, surveyors, planners, project managers and engineering technicians with an overview of the latest techniques used in acquiring and processing topographic elevation data. This data is used for planning, designing and construction of civil works and military and environmental projects. Emphasis is placed on collection techniques used to develop geospatial data bases such as topographic field surveying, LIDAR ground-based laser mapping, and photogrammetric mapping collection techniques (from field to finish). The course provides demonstrations of equipment and software used to collect and process topographic data sets collected from field surveys. Students apply PC-based software to format and transfer spatial data to CADD systems. Basic photogrammetric mapping principles are reviewed and discussed. Also discussed are A-E contracting for surveying, mapping, and photogrammetric services—this includes related cost estimating, contract administration, and quality control/quality assurance. The course provides several demonstrations as well as significant hands-on experience in the computer laboratory.

**Description.** Specific topics include:

- o GEODESY AND MAP COORDINATE SYSTEMS AND PROJECTIONS:
  - Horizontal and vertical datums.
  - State plane and UTM coordinate systems.
  - Datum translation/transformation techniques.
- o TOPOGRAPHIC MAPPING (FIELD SURVEY DATA COLLECTION TECHNIQUES)
  - Electronic total stations, GPS, and other data collection tools.
  - Field survey procedures for developing topographic data.
  - Estimating costs and preparing specifications for field surveys.
- o PROCESSING FIELD SURVEY DATA
  - Transferring and processing field observations.
  - Data translation and interface to CADD systems.
- o PHOTOGAMMETRIC MAPPING:
  - Basic principles and techniques.
  - Project planning for photogrammatic data collection.
  - Design of typical COE photogrammetric mapping projects.
  - Cost estimating.
  - Other spatial data collection systems including LIDAR.
  - Discussion of basic LIDAR principles.

- Presentation of sample LIDAR data collection projects.
- o A-E CONTRACTING FOR SURVEYING AND MAPPING
  - Types of procurement contracts.
  - COE procedures used to develop, administer and utilize A-E contracts.

**Prerequisites.** Nominees must be assigned Occupational Series: 0800, 1100, 1300. This course involves hands-on application of PC-based software using standard software computational/translation packages. Therefore, nominees must have a general knowledge of PC operation.

<u>Session</u>	<u>Location</u>	<u>Date</u>
2005-1	Huntsville, AL	04/11/2005 04/15/2005

**SURVEY IV : GPS**

**203**                      **Length: 36 Hours**                      **35GPS01A**  
**CEUs: 2.9**                      **PDHs: 29**                      **Tuition: \$1,980.00**

**Purpose.** This course provides training for surveyors, technicians, and engineers in the practical aspects of GPS surveying. The course is designed to provide a technical familiarization with EM 1110-1-1003, "NAVSTAR Global Positioning System Surveying."

**Description.** This course addresses the planning, data acquisition, data processing, and data analysis components of GPS surveying.

- o GPS CONCEPTS
- o GPS PLANNING
- o GPS DATA ACQUISITION
- o GPS DATA PROCESSING AND ADJUSTMENTS
- o GPS CONTRACTING
- o VERTICAL POSITIONING USING GPS

**Prerequisites.** Nominees should: (a) be selected occupational series 0800 (Engineers), 1300 (Surveyors and Technicians); (b) have hands-on computer experience.

<u>Session</u>	<u>Location</u>	<u>Date</u>
2005-1	Huntsville, AL	05/09/2005 05/13/2005

**TRIAL ATTORNEY**

**179**                      **Length: 40 Hours**                      **37TLA01A**  
**Tuition: \$1,800.00**

**Purpose.** This course prepares and updates Corps trial attorneys on trial advocacy skills and practice before Boards of Contract Appeals.

**Description.** The course is conducted utilizing representatives from the Chief Trial Attorney's office, the Armed Services or Engineer Board of Contract Appeals, and experienced CE trial attorneys. Topics include preparing motions and pleadings, discovery,

ethics, witness preparation, dispute resolution options, case management, conduct at trial, examining witnesses, briefing, and appeals. Also included are workshops on evidence, depositions, and trial. After completing the course, a student will be competent to represent the government as respondent's counsel in a Type I or II contract appeal.

**Prerequisites.** Nominees must be assigned (a) Occupational Series: 0905; (b) Grade: GS-11 or above.

Session	Location	Date
2005-1	Portland, OR	05/02/2005 05/06/2005

### UMCS LONWORKS

**94** Length: 35 Hours Tuition: \$1480.00

**Purpose.** This purpose of this course is to provide design, QV, and O&M staff with fundamental knowledge necessary to implement and use LonWorks systems as specified in UFGS-13801 (UMCS), and to a lesser extent UFGS-15951 (DDC and other building level control systems). It is intended for persons responsible for the design, quality verification, and operation of Utility Monitoring and Control Systems (UMCS) based on LonWorks technology. While the course includes training on some vendor-specific hardware and software, the intent of this course is to provide detailed familiarity with the application of LonWorks such that the student can apply these concepts to system design, installation, and operation to their installation's vendor-specific systems.

**Description.** LonWorks technology is based on an open-standard multi-vendor ANSI standard communications protocol that supports base-wide monitoring and control functions. This course provides instruction on LonWorks technology, how it works, how to design, and how to verify proper installation of a LonWorks based UMCS as part of a base-wide network of interconnected direct digital control (DDC) systems. The course includes instruction on LonWorks basics, ANSI 709.1 standard communications protocol, UMCS network architecture and cabling, systems integration, operator workstation requirements, LonWorks Network Services (LNS™), software tools including demonstrations, monitoring and control software, network tools, system drawings including Points Schedules, project implementation, UFGS-13801, and UMCS/DDC master planning.

**Prerequisites.** None. Attendance in one of the HVAC Control Systems LonWorks courses is helpful.

Session	Location	Date
2005-1	Huntsville, AL	11/01/2004 11/05/2004
2005-2	Huntsville, AL	03/07/2005 03/11/2005

### UNSTEADY FLOW USING HEC-RAS

**188** Length: 36 Hours 35UFA01A Tuition: \$1,830.00

**Purpose.** This course focuses on the use of the computer program HEC-RAS for the analysis of one-dimensional gradually varied unsteady open channel flow. The role and application of this model in Corps' flood studies is presented in lectures, workshops and examples.

**Description.** Primary coverage is on one-dimensional open channel hydraulics. This covers the theory, applicability, limitations, and data requirements of the HEC-RAS unsteady flow program. Guidance in selecting appropriate routing techniques for a range of problems is presented. Case studies and computer workshops are used to illustrate model usage.

**Prerequisites.** Nominees must be assigned (a) Occupational Series: Selected 0810 and 1300; (b) Grade: GS-07 or above. Nominees must have a good background in open channel hydraulics and familiarity with HEC-2, or HEC-RAS. Familiarity with the partial differential equations of fluid motion and numerical solution techniques is desirable. Participants should be in positions requiring analysis of complex hydraulic problems.

Session	Location	Date
2005-1	Davis, CA	04/04/2005 04/08/2005

### VALUE ENGINEERING

**110** Length: 40 Hours 35VEW01A  
**CEUs: 3.2** PDHs: 32 LUs: 24  
 Tuition: \$1,170.00

**Purpose.** This course provides the participant with the requirements, policies, and procedures necessary to enable the student to perform effectively as a value engineering study team member or leader; to recognize potential areas for VE studies; to identify the value of having an active Value Engineering program; and to motivate the participant to support continued development.

**Description.** Through lectures, conferences, and workshop sessions, this course provides the history of value engineering and its development in the Corps of Engineers, the need for value engineering in Corps construction, the methodology employed, the value engineering program, and contractor participation in the program. Nominees participate in class exercises and discussions. Approximately half of the course is devoted to workshops in which all participants are involved in actual value engineering studies of construction items selected by the offices involved. This course is designed primarily for training construction and design engineers and technicians in the principles and application of value engineering; however, all levels of management benefit by participating in this course.

**Prerequisites.** Nominees must be assigned (a) Occupational Series: 0340, 0800, 1300, and 1008; (b) Grade: GS-05 or above; (c) as managers with authority and responsibility for decision-making having a cost impact on Corps of Engineers projects. The course is also open to individuals who have a current or projected (within 1 year) assignment requiring knowledge of value engineering methodology. The nominee must not have attended this course in the past 5 years. Nominees must be approved by the local Value Engineering Officer of the nominating division or district.

**Notes.** This course of instruction complies with the certification standards set forth by the Society of American Value Engineers (SAVE) to fulfill the Module 1 workshop requirement portion for Certified Value Specialist.

<u>Session</u>	<u>Location</u>	<u>Date</u>
2005-1	Huntsville, AL	04/25/2005 04/29/2005

**VISITOR ASSIST MGT & POL**

**324** Length: 20 Hours 35VAU01A  
**CEUs: 1.8** Tuition: \$780.00

**Purpose.** This course provides an overview of the Corps of Engineers Visitor Assistance Program to promote consistency in Visitor Assistance policy application and explore alternative management techniques and practical applications.

**Description.** Topics covered in this course include the policy status and direction of the Visitor Assistance Program, Title 18, Title 36, communications, and legal liabilities.

**Prerequisites.** Employees who have attended the Visitor Assistance Update course within the past 5 years should not schedule this course. Attendees should be managers and supervisors at project, district, or division level who plan and manage the Visitor Assistance Program. Park Rangers, GS-9, may also attend, but they will be given a lower priority. Nominees must be approved by the Natural Resources Functional Manager at the division level. Corps Security Specialists (GS-0080), Corps military personnel serving in a security capacity and Operational Project Managers may attend the course to gain a better understanding of the Corps Visitor Assistance Program.

**Notes.** The basic Visitor Assistance NRM (No. 147) course is not a prerequisite of this course. Employees responsible for but not directly in charge of the Visitor Assistance Program (i.e., operations project managers and section branch and division chief(s)) are eligible. This course does not satisfy the requirement for authorization of citation authority.

<u>Session</u>	<u>Location</u>	<u>Date</u>
2005-1	Huntsville, AL	02/02/2005 02/04/2005

**VISITOR ASSIST NRM**

**147** Length: 36 Hours 35VAN01A  
**CEUs: 3.2** Tuition: \$1,100.00

**Purpose.** This course, in combination with other required training, satisfies the minimum requirements for Authorization of Citation Authority. This course is designed to develop an understanding of the formulation, purpose, and limitations of the Corps of Engineers Visitor Assistance Program and to prepare trainees to handle the special responsibilities required in performing their official duties. This training is supplemented by detailed Division/District instruction of citation authority implementation procedures. In order to obtain citation authority, the graduate must complete the required Basic Visitor Assistance Training Curriculum (EC 1130-2-213 - Policy revision to ER 1130-2-550. Chapter 6), have principle duties in recreation and NRM and be certified by the District Commander as per ER 1130-2-550, Chapter 6. Course provides basic Pepper Spray training to eligible employees.

**Description.** Topics covered in this course include: organization policy and mission, Title 36 and program development, Title 18, authority and jurisdiction, magistrate court, torts claims, ranger responsibilities and image, legal constraints, enforcement procedures, situational analysis, tactical communication, Pepper Spray training, and personal protection techniques.

**Prerequisites.** Employees who have previously received this training shall be nominated for the Visitor Assistance Management and Policy course (No. 324). Nominees must be assigned (a) Occupational Series: 0025, 0023, or special series such as biologist, forester, etc.; (b) Grade: GS-04 or above, seasonal and temporary employees included (employees of lower grade who are or will be performing similar duties may attend at the discretion of their manager/training coordinator). Nominees must be currently serving or have an anticipated assignment as a Corps Park Ranger or be in a directly related job such as a forester, a wildlife and fisheries manager, or a biologist. Trainees should have less than 4 years experience in the Visitor Assistance Program, as per ER 1130-2-550. Nominees must be approved by the Natural Resources Functional Manager at the Division level.

<u>Session</u>	<u>Location</u>	<u>Date</u>
2005-1	Huntsville, AL	11/15/2004 11/19/2004
2005-2	Huntsville, AL	01/31/2005 02/04/2005
2005-3	Huntsville, AL	08/08/2005 08/12/2005

 **VISITOR SURVEYS**

**750** Length: 4 Hours 54VSD01A  
**Tuition: \$125.00**

**Purpose.** This course provides prospective survey interviewers with the skills necessary to collect field recreation use data in developed recreation areas.



required. It is your responsibility to bring this to the attention of your supervisor so that an overtime request/determination can be made by your appropriate personnel. It is also your responsibility to certify the amount of time expended on these requirements to your supervisor when you request overtime compensation.

<u>Session</u>	<u>Location</u>	<u>Date</u>
2005-1	Troy, OH	04/25/2005 04/29/2005

**WELDING—QUALITY VERIFICATION**

**116**                      **Length: 36 Hours**                      **35WLQ01A**  
**CEUs: 2.9**                      **PDHs: 29**                      **Tuition: \$1,270.00**

**Purpose.** This course teaches the participant to interpret the various methods and techniques employed in weldments and assuring the quality of welds.

**Description.** Through lectures, conferences, and practical exercise sessions, this course covers the subjects of welding safety and precautions, welding symbols, processes and quality assurance problems, roof decking welding, codes, procedures, and operator qualification, filler metals, workmanship, visual inspection, dye penetrant, magnetic particles, radiographic and ultrasonic testing techniques and interpretation, and destructive testing. Quality assurance in welding is emphasized.

**Prerequisites.** Nominees must be assigned and/or have all of the following: (a) Occupational Series: 0801, 0802, 0809, 0810, and selected 0800; (b) Grade: GS-05 through GS-11; (c) other: Students should have current or projected assignments with welding quality assurance responsibilities. They must have previously completed the Quality Verification: General Construction course and must not have attended this or a similar course within the past 5 years. (d) An exportable training course "Quality Verification: Basic Welding" is available and would be helpful for students to complete prior to attending this course. It is strongly recommended for those who have minimal welding experience.

**Notes.** This course contains requirements which are mandatory for course completion and may require an estimated 6 hours of overtime. It is your responsibility to bring this to the attention of your supervisor so that an overtime request can be made by your appropriate personnel. It is also your responsibility to certify the amount of time expended on these requirements to your supervisor when you request overtime compensation.

<u>Session</u>	<u>Location</u>	<u>Date</u>
2005-1	Troy, OH	01/24/2005 01/28/2005
2005-2	Troy, OH	02/21/2005 02/25/2005

**WETLAND MITIGATION BANKING**

**239**                      **Length: 36 Hours**                      **33WMB01A**  
**Tuition: \$2,720.00**

**Purpose.** Mitigation banking has gained acceptance as a tool for managing some wetland losses. With the recent interagency policy on mitigation and the increased use of banking, it is imperative that Corps of Engineers personnel be able to apply mitigation banking principles to the plan, design, implementation, and management of mitigation banks.

**Description.** This course is offered cooperatively between the USACE Waterways Experiment Station and the Institute for Water Resources to bring together their expertise in mitigation banking issues. Based on the technical experience from WES in ecosystem restoration, management, and functional evaluation and the national mitigation bank study conducted by IWR, the course will provide students with the wide base of knowledge required to develop and manage successful mitigation banks. The course will address such subjects as setting bank goals, Federal agency perspectives on banking, financial assurances, calculation and management of credits and debits, use of the Hydrogeomorphic (HGM) Wetland Functional Assessment Method, considerations for siting and planning, and success criteria. These subjects will be illustrated with case studies of mitigation banks from around the country and interactions with people directly involved with mitigation banks. Field exercises will allow practice of some aspects of classroom instruction. The course is designed primarily with the regulator in mind; however, personnel from other Corps mission areas may benefit from the course material.

**Prerequisites.** Nominees must be assigned: (a) Occupational series: All occupational series are accepted. Priority will be given to regulatory personnel. Experience in mitigation is strongly recommended; and (b) Grade: GS-09 and above.

<u>Session</u>	<u>Location</u>	<u>Date</u>
2005-1	Orlando, FL	06/27/2005 07/01/2005

**WETLAND PLANT IDENT (SE)**

**423**                      **Length: 32 Hours**                      **33WPI01A**  
**Tuition: \$1,770.00**

**Purpose.** Practical development of plant identification techniques, focussing on wetland threatened and endangered species of the Southeastern United States.

**Description.** Wetland Plant Identification Workshop Southeastern USA provides the basic identification skills to both, laboratory and field-identify 100-200 wetland plants of concern from a planning, environmental resources, project management, regulatory and natural resource perspective. Two (2) leading wetland plant taxonomists in the USA who will be conducting the

instruction. Students will have knowledge of and be able to identify Southeastern USA wetland threatened and endangered species and their supportive habitats/ ecosystems. Participants will be able to develop and review mitigation plans focused at the plant species level and develop skill in associating the species with habitat changes. Both laboratory and field practical examinations will be conducted to validate obtained skills.

**Prerequisites.** Planning, Program Management, Regulatory, Natural Resource Management, Environmental Resources, Navigation and Engineering Personnel, GS-07 - GS-15.

<u>Session</u>	<u>Location</u>	<u>Date</u>
2005-1	Apalachicola, FL	02/14/2005 02/17/2005

**WETLAND RIVER FUNC/ECOL**

<b>426</b>	<b>Length: 32 Hours</b>	<b>33WRF01A</b>
		<b>Tuition: \$2,530.00</b>

**Purpose.** In the development of the CE Water Resources Development Act (WRDA) projects and other important CE activities, NEPA-driven mitigation measures have required increasingly rigid, complex and watershed-level functional assessments of adverse unavoidable project impacts. Historically, structural (acre for acre) mitigation has been a surrogate for functional (maintain wildlife, habitat, flood flow restoration, water quality, etc) mitigation. This approach is no longer adequate due to the rapid evolution of ecological science and the design of functional assessment methods based upon watershed geomorphology, hydrology, vegetation, landforms and associated habitats. The hydrogeomorphic functional assessment method (HGM) is a Federal Interagency tool developed to address this critical field need. This workshop focuses on small and large riverine systems in eastern and western USA and additionally provides project managers with an introduction to the "new river ecology" knowledge. An understanding of this ecological approach is essential in meeting restoration, enhancement and mitigation objectives. A special section of the workshop will cover restoration alternatives identification and assessment of deeply incised channels and floodplains of selected river systems. Participants will meet and work in facilitated problem solving classroom and field sessions with noted experts in this field.

**Description.** Topics include: (1) Introduction to wetland river ecology of the late 1990's, (2) HGM classification system, (3) HGM national and regional guidebooks, (4) Geomorphology of Mississippi River System, (5) River Ecology and HGM Assessment of Rivers in KY, TN, and MT, (6) Case studies restoration, (7) Lesson learned, (8) Mitigation Alternatives Identification/Assessment and, (9) HGM and future WRDAs and other CE authorities and (10) Calculating Habitat Units.

**Prerequisites.** Nominees may be assigned from engineering, planning, natural resource management, regulatory, etc. to include program/project management functions within the Corps of Engineers. Occupational Series: Open to all including legal, real estate, navigation, etc. This workshop is designed to provide background introductory information.

<u>Session</u>	<u>Location</u>	<u>Date</u>
2005-1	Kalispell, MT	10/04/2004 10/07/2004

**WETLANDS DEV & REST**

<b>276</b>	<b>Length: 32 Hours</b>	<b>33WDR01A</b>
		<b>Tuition: \$2,720.00</b>

**Purpose.** This course provides training in the concepts and practices of ecosystem restoration and development in both inland (fresh water) and coastal areas. The course is directed toward Corps of Engineers biologists, engineers, and natural resources managers concerned with ecosystem restoration including development and restoration of aquatic, wetland and riparian (stream/river) habitats. Practical, hands-on field experience and application of state-of-the-art techniques are emphasized and conducted by the leading national experts in the field of environmental restoration. The basic hydrologic principles in planning for and the development of environmental restoration projects is provided to meet the requirements of the Corps of Engineers and the public. Course focuses on lessons learned over the past twenty years with detailed analysis of hydrology, biology, and soils associated with both successful and failed restoration projects.

**Description.** National training is conducted at three (3) regional wetland sites representing major wetland ecosystems: East Coast, West Coast, and at a Gulf of Mexico major estuary site. Technical sessions focus on marine, estuarine, and freshwater wetlands development and restoration of the particular coastal area involved (East Coast and West Coast). The Gulf of Mexico site focuses on wetland ecosystem restoration and development nationwide but emphasizes sites in Texas, Louisiana, Mississippi, Alabama, and Florida. All sessions include methods and case study training in site selection, determining water management (hydrology) and site design specifications, plant selection and revegetation techniques, operation and maintenance requirements, procedures for measuring and evaluating success of aquatic, riparian, wetlands, seagrass development and restoration and key factors to consider to determine the cost, manpower, expertise, equipment and materials required to successfully develop and restore these habitats. Selected case studies focused on lessons learned and extensive field exercises are included. Training is also provided for the following topics, as applicable, based on the location of the particular sessions: (1) hydrologic considerations for ecosystem restoration, (2) techniques for developing new and restored coastal and interior wetlands and seagrass beds, as applicable, using selected case studies, (3) techniques and examples for using wetland

vegetation as an alternative to structural techniques for shoreline and levee erosion control, (4) identification of sources and methods for obtaining suitable plant stock including key factors that affect development and restoration costs and success rates; and (5) mitigation techniques for evaluation, predicting and reducing impacts of engineering activities in wetlands and seagrass areas, (6) guidance on key factors that should be considered when preparing work orders and contracts for restoration activities.

**Prerequisites.** Nominees must be assigned (a) Occupational Series: 0025, 0028, 0150, 0400, 0800, and 1300. Highly recommended for planning, regulatory, environmental resources, policy, engineering and natural resources management personnel and those involved with the planning and implementation of ecosystem restoration projects, regulating and evaluating restored wetlands and seagrass; (b) GS-07 and above is suggested.

**SPECIAL INSTRUCTIONS:** Wetland classes are scheduled during mild periods of the year; however weather conditions can and do change dramatically at the field sites and students should expect to get wet and have extensive hands-on field exercises. Student nominations should be submitted for the location most closely related to your own training areas but should not preclude the opportunity to view and experience advanced geographical specific ecosystem wetland restoration and development projects at other Corps project sites.

Session	Location	Date
2005-1	Apalachicola, FL	03/07/2005 03/10/2005
2005-2	Olympia, WA	08/29/2005 09/01/2005

**WETLANDS EVALUATION PROCEDURES**

**273** Length: 36 Hours 33WEP01A  
**CEUs: 2.2** PDHs: 22

**Purpose.** In planning civil works projects, wetlands, restoration or mitigation measures now require increasingly rigid and complex evaluation of the benefits expected from the wetlands restored or replaced. Restoration of wetlands on existing Corps project lands under Section 1135 or 206 also require increasingly sophisticated evaluation techniques for their justification. This course provides an in-depth introduction and overview of existing wetland evaluation procedures and case study application to wetland systems for environmental impact assessment and evaluation purposes. Methods to identify and evaluate the functions of wetlands and their corresponding values to the ecosystem and society will be discussed. Evaluation of wetlands' role in an ecosystem and watershed setting will be addressed. The requirements for wetlands evaluation and justification during project planning, operations, and the natural resources management phases of the civil works program will be stressed.

**Description.** Topics include (a) introduction and overview of wetlands evaluation procedures and techniques

currently in use and being developed; in-depth discussion of those selected techniques particularly applicable for Corps project planning and operations purposes; (b) discussion of the field operational applicability and constraints of selected wetlands evaluation techniques; (c) review of case studies and lessons learned; (d) laboratory, demonstration, and field experience with selected evaluation methods and specific wetland functions; and (e) open discussion and problem-solving.

**Prerequisites.** Nominees must be assigned (a) primarily as planning division and natural resources management personnel operations and regulatory functions personnel will also benefit; (b) Occupational Series: planning division personnel (biologists, engineers, economists, and other professionals in the planning function) as well as operations staff (natural resources management, dredging), environmental specialists, and regulatory staff; (c) Grade: GS-09 or above; and (d) successful completion of "Fundamental of Wetland Ecology" (PROSPECT course No. 272), or equivalent field experience or course work.

**WORKING DIVER**

**35** Length: 160 Hours 58DVS01A  
**Tuition: \$4,590.00**

**Purpose.** This course provides Corps of Engineers employees who are assigned as divers, diver supervisors, and/or agency diving coordinators with the necessary skills, knowledges, and abilities to safely perform their assigned underwater tasks. This training will provide students with state-of-art technology and methodology to safely perform underwater diving operations and effectively manage diving contingencies.

**Description.** Students will become familiar with and perform underwater exercises with state-of-art diving systems including self contained underwater breathing apparatus (SCUBA) and Surface Supplied Air equipment. This course consists of classroom presentations, training pool exercises, open water activities, and practical operations. Sessions pertinent to underwater diving operations will include, but are not limited to, the following topics and activities: (a) diving physics; (b) diving physiology; (c) diving medicine; (d) modern diving systems and support equipment; (e) SCUBA equipment and operations; (f) surface supplied air equipment and operations; (g) decompression principles & associated tables; (h) modern diving accident management techniques; (i) working dive planning; (j) diver supervision principles and practices (k) preparation and use of Activity Hazard Analyses; (l) USACE, OSHA, and US Navy diving regulations (ER 385-1-86, EM 385-1-1, 29 CFR 1910, and US Navy Diving Manual); and (m) management of the diving function.

**Prerequisites.** (a) Students for this course must have a current or projected assignment to a position requiring underwater diving skills and prior to attending this training must hold a SCUBA training certificate or equivalent

lent from a nationally recognized diver training organization, e.g., PADI, NAUI, etc. Failure to provide evidence of diver certification will be cause for rejection; (b) Nominees must successfully complete a diving medical examination as detailed in ER 385-1-86 within the past 11 months and provide a copy of the completed medical form to the training agent on the first day of class; and (c) Students must participate in all lectures, written and practical exercises, and score at least 70 percent on the comprehensive post-course examination to receive diver certification. Exceptions or deviations to any of these prerequisites shall be approved by the HQUSACE Safety and Occupational Health Office.

**Prerequisites.** This class is open to all Military and Civilian personnel employed by the U.S. Government. Nominees must be assigned in Civilian Occupational Series: 0301, 0301, 0322, 1342, 0344, 1101, 1170, 1173. Grade: GS-05 or above. Military personnel equivalents should be used to determine eligibility. Students should have worked one year or more in a position dealing with the assignment of space on an installation/major federal facility or the assignment of organization to an installation/major federal facility. Student should bring a hand-held calculator to the seminar.

<u>Session</u>	<u>Location</u>	<u>Date</u>
2005-1	Key West, FL	09/06/2005 09/30/2005

**FEDERAL FACILITY PLANNING AND RELOCATION SEMINAR**

**953**                      **Length: 24 hours**  
                                  **Onsite Only**

**Purpose.** The purpose of this Seminar is to introduce students to all phases of the project delivery process for space acquisition, particularly programming, building material specifications, furniture specifications, sustainable design issues and relocation processes. The seminar will provide essentials tools and skills for novices and beginners to perform the necessary tasks associated with space planning and relocation. Never the less, experienced programmers and facility managers will benefit from explanations of the management consequences of their technical tasks. Emphasis will be on the the strategic importance of programming in an orderly planning process.

**Description.** The three day seminar will be presented placing the student in the role of a project manager. The material will be presented and organized according to the step-by-step sequence of tasks that comprise the six phases of a straightforward project delivery process for federal facility spaces. The general structure of the course is as follows: project delivery process overview, building surveys, user surveys, development of workstation standards, calculating space requirements, identifying the project delivery team, development of building standards, sustainable design issues, furniture selection, furniture procurement, identifying the relocation team and the tasks associated with relocating an organization or activity. A mock client will be used in the practical exercises to provide the students with hands-on problems to solve. Throughout the three days of instruction, the strategic management aspects of providing information on which sound space and furniture procurement package are based will be emphasized. During class lectures opportunities will be provided for students to discuss the challenges of implementing the plans developed by the students. A "lessons learned" list will be developed by the class associated with each phase of the project delivery process to bring attention to the potential problems that can occur during a project.

## DISTANCE LEARNING -YOUR TRAINING SOLUTION

Distance learning has been defined by the United States Distance Learning Association as "The delivery of education and training through electronically mediated instruction including satellite, video, audio-graphic, computer, multi-media technology and other forms of learning at a distance." Distance learning provides training opportunities to the workplace when and where it's needed.

The United States Army Corps of Engineers Professional Development Support Center's (PDSC) Distance Learning Division can assist your organization in meeting its training goals. The PDSC has provided quality distance learning products to the Corps of Engineers and other government agencies for over 20 years. Selected training and awareness courses are offered through video and CD-ROM-based exportable courses, video-teletraining, and web-based (Internet) training courses.

**Exportable courses** are a series of job-related exportable training courses that provides a set of training materials that can be used at local offices. Exportable courses are visual-based, task active, and facilitator-led. The course components are integrated and dependent upon each other to train successfully. A typical exportable course is composed of a Visual Content Carrier (video tape or CD-ROM), a Facilitator's Guide, and a Student Study Guide. The local facilitator coordinates these materials and serve as the training motivator and moderator.

**Video TeleTraining (VTT)** provides access to broader educational and training opportunities and specialized expert assistance. The best Corps trainers present stimulating lectures on technical, professional, and organizational development in real time via audio and video transmissions.

**Web-based Training (WBT)** is an innovative approach to distance learning in which computer-based training is provided through the World Wide Web, the Internet, and intranets. Web-based training presents live content, as fresh as the moment and modified at will, in a structure allowing self-directed, self-paced instruction in any topic. WBT is media-rich training fully capable of evaluation, adaptation, and remediation, all independent of computer platform.

## PROCEDURES FOR PURCHASING DISTANCE LEARNING COURSES

The Distance Learning Training Program is a pay as-you-go system. This means that each course must pay for itself. Therefore, agencies purchasing a distance learning course are required to forward funds to the U.S. Army Engineering and Support Center, Huntsville, to cover the purchase prior to our shipping course materials to the agency.

The method of reimbursement for video-based courses is via a government issued credit card. Government credit card transactions can be accomplished by contacting, Judy Armstrong, 256-895-7419, fax, 256-895-7481, email: Judy.H.Armstrong@hnd01.usace.army.mil a credit card form will be emailed to the requesting agency.

For all types of distance learning courses the credit card form should state the title of the course, billing address, shipping address and telephone number of the receiving agency. If materials are requested, the number of video sets, Facilitator Guides (FGs), Student Study Guides (SSGs), floppy disks and/or CDs should be indicated. The course description page includes the cost. Additional FGs are \$25 each. Additional SSGs are \$20 each.

The Professional Development Support Center can assist you in making "Distance Learning -Your Training Solution". For information about the distance learning program, contact James Mitchell at 256-895-7413 or visit our web site at <http://pdsc.usace.army.mil>.

## INSTALLATION SUPPORT TRAINING DIVISION ENVIRONMENTAL TRAINING BRANCH

Environmental Training Branch of the Installation Support Training Division provides environmental training program support services for the Army and Department of Defense.

### SERVICES AND PRODUCTS

- Assists installation personnel in identifying resources for environmental staff training, including other Army schools.
- Develops or arranges purchase of Integrated Training Area Management (ITAM) products on request.
- Organization-specific environmental awareness products, i.e., field cards, posters, videos, job aids.
- Seibert stakes used by DoD to identify "off limits" areas due to environmental or other concerns during training.

### ELECTRONIC SOURCES OF ENVIRONMENTAL INFORMATION

- DEFENSE ENVIRONMENTAL NETWORK FOR INFORMATION EXCHANGE (DENIX).  
<http://denix.cecer.army.mil/denix/denix.html>
- World Wide Web Address, <http://pdsc.usace.army.mil>

Installation Support Environmental Training  
POC: Betty Batts  
Environmental Programs Manager  
(256) 895-7407  
[Betty.J.Batts@HND01.usace.army.mil](mailto:Betty.J.Batts@HND01.usace.army.mil)

## PUBLIC WORKS INTEGRATED FACILITIES MANAGEMENT SYSTEM (IFS) SYSTEMS AND MANAGEMENT TRAINING CURRICULUM

This curriculum covers five functional areas within the Public Works Directorate: Operational Management, Systems Administration, Data Collection and Interpretation, Financial Management and Work Management. It is strongly recommended that Oracle courses offered by the Army e-Learning/Web Based training at: <https://www.atrrs.army.mil/channels/eLearning/smartforce/> be taken prior to attending IFS specific training. Several of our courses require some of these courses as prerequisites.

To sign up for new e-Learning, students must log onto: <http://www.atrrs.army.mil/channels/eLearning/smartforce/> read the directions to register and establish an AKO User Name and AKO password. After these are accomplished, sign up and register for the courses. These courses are "at no cost" to Military and Civilian Employees.

### OPERATIONAL MANAGEMENT:

IT for Managers, CRS # 984

### SYSTEMS ADMINISTRATION:

Prerequisites: <https://www.atrrs.army.mil/channels/eLearning/smartforce/> - Oracle 8i Database Administration courses: 1Z0-023, 1Z0-024, 1Z0-025, 1Z0-026

### DATA COLLECTION & INTERPRETATION:

Prerequisite: <https://www.atrrs.army.mil/channels/eLearning/smartforce/> - Oracle Introduction 1Z0-001

SQL FOR IFS, CRS # 975

DPW IFS Introduction, CRS # 971

### FINANCIAL MANAGEMENT:

DPW Budget/JCA, CRS # 981

### WORK MANAGEMENT:

DPW Work Reception, CRS # 980  
DPW Work Estimating, CRS # 983  
Contr Mgmt Sys (CMS), CRS # 933

## 5-A FEDERAL EXECUTIVE INSTITUTE (FEI)

The Federal Executive Institute offers three types of residential programs at its Charlottesville, Virginia, campus: 4-week Leadership for a Democratic Society, 1-week Work Team Development Programs, and 1-week alumni programs.

### NOMINATION PROCEDURES

Annually, HQDA allocates spaces for the 4-week Leadership for a Democratic Society program. (USACE Commands interested in the 1-week Work Team Developmental or Alumni Follow-Up programs are advised to contact FEI directly.) HQUSACE (CEHR-D) requests nominations from all USACE commands and selections are made by the Human Resources Development (HRD) Subcommittee based on the following criteria: performance, employee's statement of interest, prior training, and Commander's endorsement. For more information on the program, you should access websites: [www.opm.gov](http://www.opm.gov) and/or [www.cpol.army.mil](http://www.cpol.army.mil).

### ADDRESS

**FEDERAL EXECUTIVE INSTITUTE**  
**1301 Emmet Street**  
**Charlottesville, VA 22903-4899**  
**Telephone: (804)980-6200**

### FUNDING

All costs are the responsibility of the nominating USACE command.

### STUDENT NOTIFICATION

HQUSACE (CEHR-D) will announce selections through HROs/CPACs. FEI will provide read-ahead material to selectees no later than 2 weeks preceding the start of the scheduled class session.

## THE LEADERSHIP FOR A DEMOCRATIC SOCIETY PROGRAM

**Course Length: 160 Hours;**  
**Location: Charlottesville, VA**

**PURPOSE.** This program is designed to meet the executive development needs of senior level officials in the Federal Government who are already highly skilled in their technical specialties and in the programmatic and administrative processes of their own agencies. The program assumes that executives are concerned about leadership at the executive level and are interested in exploring, with their peers from other agencies, the essence of public service management - a "second profession" that each of them enters when they become a senior official in their agencies. The program also assumes that executives are highly motivated, particularly when assessing their own capabilities, identifying areas in which they need additional development or exposure, and participating in courses which they select to meet their own needs.

**DESCRIPTION.** The most current information can be accessed on the internet at [www.opm.gov](http://www.opm.gov) and/or [www.cpol.army.mil](http://www.cpol.army.mil). This program emphasizes a performance-based approach to individual development and leadership in the federal context. The fundamental program objective is to link individual development to improved organizational performance. The program addresses the active leadership role expected of career senior managers and the democratic values and beliefs that underpin that leadership. The theme of "specialist to generalist to leader" is integrated throughout the program as participants focus on innovative federal management practice through access to distinguished speakers and week-long classes that stress the strategic view of executive management and human resource development.

**PREREQUISITES.** The most current information can be accessed on the internet at [www.opm.gov](http://www.opm.gov) and/or [www.cpol.army.mil](http://www.cpol.army.mil). Leadership For A Democratic Society is designed to meet the needs of key federal executives in the public sector. Priority for accepting participants into the program will be given in the following order:

1. SES members and those in equivalent positions in other federal pay systems.
2. GM-15 high potential managers and those GM-15s enrolled in or who have completed an approved SES Candidate Development Program.
3. A select number of executives at the equivalent levels from state, local, or foreign governments, from non-profit organizations, and from the private sector.

## 5-B MANAGEMENT DEVELOPMENT CENTERS

### NOMINATION PROCEDURES

The most current information can be accessed on the internet at [www.opm.gov](http://www.opm.gov) and/or [www.cpol.army.mil](http://www.cpol.army.mil).

### AUDIENCE

Specific eligibility criteria for each seminar are listed in course descriptions.

### LENGTH OF SEMINARS

Most are 2 weeks; however, a few are 1-week long. The Management Development Centers offer four kinds of seminars:

1. Leadership and Management Development (Seminar for New Managers, Management Development Seminar, and Executive Development Seminar) are the foundation seminars required for those government managers who need to go beyond their immediate organizational perspective to truly understand the breadth and responsibility of their profession as leaders within the Executive branch of government. They serve to strengthen the sense of corporate identity among the government's leadership corps as individuals progress through the leadership ranks. These programs emphasize the critical Constitutional role of the Federal manager and executive in carrying out the policies and priorities of the President. They focus on leadership, provide knowledge and promote understanding of key Administration and Congressional initiatives, and develop those competencies that have been identified by ongoing research as necessary to successful executive and managerial performance.
  - Seminar for New Managers
  - Management Development Seminar
  - Executive Development Seminar
2. Leadership and Management Assessment Programs expose participants and organizations to a variety of assessment instruments, simulations, exercises, and feedback methodologies. These programs are designed to help managers and executives in effective career development and in proving leadership practices.
  - Leadership Assessment Program
  - Management Assessment Program
  - Executive Assessment Program

3. Supervisory and Team Leadership Institute was established to open our programs to a broader range of current and future leaders to help begin the development of a sense of corporate culture earlier in the potential executive's career. These programs are designed to complement our Core Curriculum seminars. They are open to participants at GS-11 and above and are designed around the critical competencies needed as a new supervisor, a team leader, or team member. They will help individuals to examine the competencies needed to enter supervision and to progress further in their development as a future government manager.
  - Leadership Potential Seminar
  - Team Building and Team Leadership
  - Developing High Performing Teams
  - Managing Project Teams
  - Supervisory Leadership Seminar
4. Public Policy and Contemporary Government Issues Seminars provide a forum for career government managers and executives to address key Administration policy implementation issues with senior policy officials and experts from academia and the private sector. This opportunity for interaction between senior level policy implementers is one of the unique strengths of the Management Development Center system. During workshops, participants explore policy issues relevant to their own agencies and programs and to larger national concerns.
  - Alternative Dispute Resolution
  - Developing Customer-Focused Organizations
  - Dynamics of Public Policy
  - Enterprise Government Management
  - Environmental Policy Issues
  - Executive Communications Workshop
  - Executive Forum on Current Issues
  - Federal Budgetary Policy and Processes
  - Federal Human Resources Management
  - Government Performance and Results
  - Management of Information Technology
  - National Security Policy
  - Natural Resources Seminar: Policies and Issues
  - Science, Technology, and Public Policy
  - Strategies to Build High Performing Organizations
  - Transferring Federal Technology: An Introduction
  - Transferring Federal Technology: Advanced Seminar in Effective Strategies
  - United States Foreign Policy Seminar

## LONG TERM TRAINING (LTT)

A variety of LTT opportunities are provided by DOD, HQDA, HQUSACE, and local activities. These programs are announced annually in HQDA's Catalog of Civilian Training, Education and Professional Development Opportunities. This catalog is also available on the Army Civilian Personnel Online at <http://www.cpol.army.mil>. The most popular recurring programs are described below. If you are interested in any of these programs or do not see a program you are interested in, please contact your HRD or CPAC to obtain more information.

### 1. HQDA Sponsored Long Term Training:

- a. The Military Colleges and Fellowship Programs include the National War College (NWC), Industrial College of the Armed Forces (ICAF), Army War College Resident Program (AWC), Army War College Corresponding Studies Program (AWC/CSP), Congressional Fellowship, and the Secretary of the Army Research and Study Fellowship (SAR&SF). Selections for Senior Service Colleges and the Army Congressional Fellowship program are made based on the following: employee motivation; knowledges, skills and abilities; and need for training. The selection criteria for SAR&SF include: outline of proposed study; publications or specimens of work; and need for training. Course descriptions for these programs follow.
- b. Competitive Professional Development Opportunities. This program includes four types of training: university training, developmental assignments, training with industry, and other. The program is announced annually in HQDA's Catalog of Civilian Training, Education and Professional Development Opportunities. The target audience for these programs is military-funded employees covered by HQDA career programs and in grades GS-11 and above.
- c. Other Programs. Other HQDA sponsored training opportunities are described in the annual publication of the Catalog of Civilian Training, Education, and Professional Development Opportunities. These programs include: the Army Sustaining Base Leadership and Management Program, Army Comptrollership Program at Syracuse, Professional Enhancement Programs, and Harvard University Programs. Application procedures and selection criteria are provided in the Catalog. Contact your HRO, CPAC, and/or career program manager to obtain additional information.

### 2. HQUSACE Sponsored Long Term Training.

This training consists of four programs: the Mission Related Graduate Program (MRGP), the Graduate Fellowship in Water Resources and Environmental Law (WREL) Program, the Coastal Engineering Education Program (CEEP), and the Project Management Program (PMP). Nominating procedures, eligibility criteria, and other general information are provided in ER 350-1-416, HQUSACE Centrally and Locally Sponsored LTT. The eligibility criteria includes the following: commander's endorsement, employee's statement of need, performance, supervisory statement of relevance of training to need, and post-training utilization.

## SENIOR SERVICE COLLEGES (SSC)

**AUDIENCE.** Department of the Army civilian employees at the GS/GM-14/15 level who have career status and are serving in permanent competitive appointments; Schedule A, Excepted appointments without time limitation; or, are serving under an Excepted Service appointment in the Civilian Intelligence Personnel Management System (Title 10 USC 1590) and have a minimum of 3 years of consecutive service under one or more permanent appointments. High potential GS/GM-13s will be considered for Army War College only.

**REQUIREMENTS.** Applicant must have or be able to obtain a TOP SECRET clearance prior to starting the training program. As part of the application process, applicants for SSC are required to sign a mobility agreement obligating them to accept reassignment. These post-graduate assignments may be located in the Continental United States (CONUS) or in an overseas area (OCONUS).

### DESCRIPTION OF PROGRAMS:

**The National War College (NWC):** Conducts senior-level instruction in national security strategy to prepare selected military officers and federal officials for high-level policy, command, and staff responsibilities. NWC focuses on national security policy and strategy with a joint, multiservice perspective. The curriculum is designed to expand and deepen students' knowledge of national security matters and to sharpen their analytical skills. The academic program consists of prescribed core courses, advanced studies, and regional studies. Teaching methods include lectures, seminar discussions, case studies, and student exercises. Location: Fort Lesley J. McNair, Washington, D.C. Length of Training: 10 months.

**The Industrial College of the Armed Forces (ICAF):** Prepares selected military officers and civilians for senior leadership and staff positions by conducting executive-level courses of study and associated research dealing with the resource component of national power and its integration into national security

strategy for peace and war. The curriculum focuses on broad-based national security decision-making for senior policymakers in a dynamic world environment. The curriculum consists of courses presented in a balanced mix of seminars and lectures. The program emphasizes the case method, complemented by extensive student reading, written and oral presentations, classroom analysis, lectures by faculty members and prominent outside authorities, and a field study program. Location: Fort Lesley J. McNair, Washington, D.C. Length of Training: 10 months.

**The Army War College (AWC) Resident:** Prepares selected military officers and civilians for senior leadership responsibilities in a strategic environment during peace and war. AWC studies the role of landpower, as part of a joint or combined force, in support of the U.S. national military strategy. The curriculum emphasizes theory, concepts, systems, and the national security decision-making process. The AWC teaches through numerous case studies, exercises, and wargames. The student seminar group is the fundamental learning vehicle at the school. Location: Carlisle Barracks, Pennsylvania. Length of Training: 10 to 12 months.

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### **ARMY CONGRESSIONAL FELLOWSHIP PROGRAM**

**AUDIENCE:** Civilian employees at the GS/GM-13-15 level or above serving in career or schedule A appointments without time limitation.

**LENGTH OF PROGRAM:** 6 or 12 months

**DESCRIPTION OF PROGRAM:**

The Army Congressional Fellowship Program is designed to provide congressional training to top Army officers and civilians. This program supersedes all previous congressional fellowship programs and begins each year in August. Selected fellows will attend the Force Integration Course and participate in a Congressional Training Program. After completion of a one month classroom phase and orientation to HQDA, congressional fellows serve as staff assistants to Members of Congress. Fellows are typically given responsibility for drafting legislation, arranging congressional hearings, writing speeches and floor statements, and briefing Members for committee deliberations and floor debate.

**SECTION 7 - IS FOR CORPS OF ENGINEERS ONLY**

**SECTION 7**

**ARMY SERVICE SCHOOLS AND DEFENSE MANAGEMENT EDUCATION AND TRAINING (DMET)**

**GENERAL:** The courses in this section are listed by subject matter. Course descriptions, prerequisites, and length may be obtained from your local Training Officer.

**SOURCE:** Document for the Army Service Schools is the Army Formal Schools Catalog, DA Pamphlet 351-4 (31 Oct 95). The Defense Management Education and Training (DMET) Schools, information is contained in DOD 5010.16.c.

**NOMINATION PROCEDURES**

1. The USACE Professional Development Support Center (CEHR-P) receives the DOD quotas through the Structure Manning Decision Review (SMDR) process which is accomplished 3 years prior to the Fiscal Year the courses will be given.
2. The quotas received are published to all training POCs, and are issued on a first come, first serve basis; upon receipt of a DD 1556 (Request, Authorization, Agreement, Certification of Training and Reimbursement).
3. The employee's supervisor must submit a DD Form 1556 for all primary and space-available nominations to the Training Officer. All requirements must be processed through your Training Officer, who faxes them to (256) 895-7469, DSN 760-7469 or forwards them to CEHR-P-RG at the following address:

Commander  
 USACE  
 Professional Development Support Center  
 ATTN: CEHR-RG  
 P.O. Box 1600  
 Huntsville, Alabama 35807-4301

**COST**

There is no tuition charge for resident spaces for these classes, except Inspector General Auditor Training Institute. Organization sponsoring on-site classes will be charged a fee.

**STUDENT NOTIFICATION**

1. TRADOC Service Schools. DA Pamphlet 351-4 provides telephone numbers and general reporting instructions for each school. Training Officers and/or students should contact the school for additional information not mentioned in the DA Pamphlet.
2. Auditor School. A letter is sent to each student prior to course start date.
3. Inspector General Auditor Training Institute. A letter is sent to each student prior to course start date.
4. Judge Advocate General School. Forwards reporting instructions to students prior to course start date.
5. DMET Schools:
  - a. Resident Courses. Students receive reporting instructions from the school before course start date.
  - b. On-site Courses. Students receive reporting instructions from the hosting activity before course start date.

**SCHEDULES**

Schedules which include dates and locations may be obtained from your Training Officer in August/September for the next fiscal year.

<b><u>MAJOR ARMY SERVICE SCHOOL SPONSORS</u></b>	<b><u>SCHOOL CODE</u></b>
Academy of Health Sciences ..... Ft. Sam Houston, Texas	28
Army Audit School ..... Washington, DC	26
Army Chemical School ..... Ft. McClellan, Alabama	21
Army Command and General Staff College ..... Ft. Leavenworth, Kansas	31
Army Logistics Management College (ALMC) ..... Ft. Lee, Virginia	6
Army Military Police School ..... Ft Leonard Wood, Missouri 6547-5000	23
Army Quartermaster School ..... Ft. Lee, Virginia	20
Army Safety Center ..... Ft. Rucker, Alabama	18
Army Signal School ..... Ft. Gordon, Georgia	30
Army Soldier Support, Finance School ..... Ft. Jackson, South Carolina	24
Army Transportation Center and School ..... Ft. Eustis, Virginia	25
Defense Information School ..... Ft. Benjamin Harrison, Indiana	19
Defense Mapping School ..... Ft. Belvoir, Virginia	29
Inspector General Auditor Training Institute ..... Ft. Belvoir, Virginia	34
The Judge Advocate General's School ..... Charlottesville, Virginia	17
School of Military Packaging Technology (SMPT) ..... Aberdeen Proving Ground, Maryland	7
Air Force Institute of Technology (AFIT) ..... Wright Patterson AFB, Ohio	3
Air Training Command ..... Lackland AFB, Texas	4
Air University Center for Professional Development ..... Maxwell AFB, Alabama	15
Army Defense Ammunition Center and School ..... Savanna, Illinois	8

**MAJOR DMET SPONSORS**

**SCHOOL CODE**

Defense Institute Security Assistance Management (DISAM) ..... Wright Patterson AFB, Ohio	12
Defense Logistics Agency (DLA) ..... Civilian Personnel Service Support Office Columbus, Ohio	33
Defense Resource Management Education Center ..... Monterey, California	10
Defense Security Institute (DSI) ..... Richmond, Virginia	9
Defense Systems Management College (DSMC) ..... Washington, DC	2
Information Resources Management College (IRMC) ..... Washington, DC	1

**LIST OF COURSES**

**ADP**

<b><u>COURSE TITLE</u></b>	<b><u>COURSE NUMBER</u></b>	<b><u>CONTROL NUMBER</u></b>	<b><u>SCHOOL CODE</u></b>
AIS STRATEGIES .....		459 .....	1
DOD CORP INFO MGT .....	41BC7 .....	451 .....	1
INFO ENGR MGT .....		453 .....	1

**AUDITOR**

<b><u>COURSE TITLE</u></b>	<b><u>COURSE NUMBER</u></b>	<b><u>CONTROL NUMBER</u></b>	<b><u>SCHOOL CODE</u></b>
ADV AUDIT TECHNIQUES .....		947 .....	
AIC REPORT WRITING .....		941 .....	26
AUDIT MGT .....		946 .....	26
AUDIT SUPERVISOR .....		945 .....	26
AUDIT SUPV WRITING .....		948 .....	26
AUDITOR-IN-CHARGE .....		994 .....	34
BASIC REPORT WRITING .....		943 .....	26
EFFECTIVE AUD PRES .....		996 .....	34
FRAUD AUDITING .....		995 .....	34
FINANCIAL STATEMENTS .....		998 .....	34
INTRO TO AUDITING .....		940 .....	26
INTRO AUDITOR TRNG .....		992 .....	34
INTRO FINANCIAL AUD .....		997 .....	34
INTERMEDIATE AUDITOR .....		939 .....	26
LEVEL II A .....		942 .....	26
SENIOR AUDITOR .....		944 .....	26

**ENVIRONMENTAL**

<b><u>COURSE TITLE</u></b>	<b><u>COURSE NUMBER</u></b>	<b><u>CONTROL NUMBER</u></b>	<b><u>SCHOOL CODE</u></b>
DEF HAZARD MAT/WASTE HDLG .....	56HWW .....	831 .....	6
ENVIRONMENTAL PROCT/INVTGN .....		835 .....	23
GEN TRANS HAZ MAT .....	56TPH .....	662 .....	8
HAZARDOUS MAT HDLG .....	56HMH .....	653 .....	7
HAZARD PROP MGT .....	56HPM .....	836 .....	6
INSTL TRAF MGT HAZ .....	56THZ .....	663 .....	8
PKG HAZARD MAT TRANS .....	56PHM .....	647 .....	7
PKG HAZ MAT TRAN-REF .....	56RPH .....	654 .....	7
TECH CHEM SURETY MAT .....	56TCS .....	665 .....	8
TECH TRANS HAZ MAT .....	56THM .....	664 .....	8

## LIST OF COURSES (Continued)

**LEGAL**

<b><u>COURSE TITLE</u></b>	<b><u>COURSE NUMBER</u></b>	<b><u>CONTROL NUMBER</u></b>	<b><u>SCHOOL CODE</u></b>
ADMIN LAW MIL INSTL .....	37ALI .....	874 .....	17
CONTRACT LITIGATION .....	3700 .....	882 .....	17
FEDERAL LITIGATION .....	37FLT .....	875 .....	17
FED CRTS & BRDS LITI .....	37000 .....	877 .....	17
CONTRACT ATTORNEYS .....	37CAT .....	876 .....	17
ETHICS COUNSELOR .....	37000 .....	883 .....	17
FED LABOR RELATIONS .....	37FLR .....	878 .....	17
FISCAL LAW .....	41FSL .....	879 .....	17
GOVT CONTR LAW SYMP .....	37CLS .....	880 .....	17
PROCUREMENT FRAUD .....	37PCF .....	886 .....	17

**LOGISTICS**

<b><u>COURSE TITLE</u></b>	<b><u>COURSE NUMBER</u></b>	<b><u>CONTROL NUMBER</u></b>	<b><u>SCHOOL CODE</u></b>
INDUS MAINT MGT .....	41BBV .....	483 .....	3
INSTL LOG MGT .....	45ILM .....	805 .....	6
LOGISTICS MGT DEV .....	45LMD .....	809 .....	6

**MANAGEMENT**

<b><u>COURSE TITLE</u></b>	<b><u>COURSE NUMBER</u></b>	<b><u>CONTROL NUMBER</u></b>	<b><u>SCHOOL CODE</u></b>
ARMY MAINTENANCE MGT .....	45AMM .....	811 .....	6
MANPOWER/FORCE MGMT .....	46MFM .....	830 .....	6
SCTY ASST MGT-EX .....		690 .....	12

**PACKAGING, SHIPPING, AND STORAGE**

<b><u>COURSE TITLE</u></b>	<b><u>COURSE NUMBER</u></b>	<b><u>CONTROL NUMBER</u></b>	<b><u>SCHOOL CODE</u></b>
BASIC PRESER & PKG .....	45BPP .....	643 .....	7
DEF PACKAGING DESIGN .....	45DPD .....	649 .....	7
DEF PKG LOG MGR .....	15PLM .....	650 .....	7
DEF PKG/UTILIZATION .....	45DPU .....	646 .....	7
HAZARDOUS MAT HDLG .....	56HMH .....	653 .....	7
MARKING SHIPMT/STOR .....	45MSS .....	645 .....	7
PKG HAZARD MAT TRANS .....	56PHM .....	647 .....	7
PRES/INTERMED PROT .....	45000 .....	651 .....	7
VECH PROC SHIP/STOR .....	45VPS .....	652 .....	7

**PROCUREMENT/CONTRACTING**

<b><u>COURSE TITLE</u></b>	<b><u>COURSE NUMBER</u></b>	<b><u>CONTROL NUMBER</u></b>	<b><u>SCHOOL CODE</u></b>
ADV COST/ECON ANAL .....	41JQI .....	491 .....	3
CONTRACTING OFF REP .....	41BA9 .....	814 .....	6
EX REFRESH-PROG MGT .....	15BB8 .....	469 .....	2
INTRO UTIL CONTR .....	41000 .....	522 .....	4
INTRO/LIFE CYCL COST .....	41LCC .....	500 .....	3

LIST OF COURSES (Continued)

**PUBLIC AFFAIRS**

<b><u>COURSE TITLE</u></b>	<b><u>COURSE NUMBER</u></b>	<b><u>CONTROL NUMBER</u></b>	<b><u>SCHOOL CODE</u></b>
BASIC JOURNALIST .....	52BJN .....	894 .....	19
PUBLIC AFFAIRS OFF .....	52PAO .....	896 .....	19
SR PUBLIC AFFAIRS .....	21SPA .....	899 .....	19
THE EDITOR .....	52TED .....	900 .....	19

**RESOURCE MANAGEMENT**

<b><u>COURSE TITLE</u></b>	<b><u>COURSE NUMBER</u></b>	<b><u>CONTROL NUMBER</u></b>	<b><u>SCHOOL CODE</u></b>
ADV MGT ACCT ANAL .....	42AMA .....	915 .....	24
COMMER ACCTS ADMIN .....	42CAA .....	917 .....	24
DEF RESOURCES MGT .....	41BAI .....	678 .....	10
DISB OPERATIONS .....	42DBO .....	918 .....	24
INTRO/LIFE CYCL COST .....	41LCC .....	500 .....	3
MANPOWER & FORCE MGT .....	46MFM .....	830 .....	6
MILITARY ACCOUNTING .....	42MAC .....	919 .....	24
PPB&ES .....	42PPB .....	921 .....	24
RESOURCE MGT BUDGET .....	42RMB .....	922 .....	24
RESOURCE MGT TACT .....	42RMT .....	926 .....	24
SCTY ASST MGT-FIN .....	.....	691 .....	12
TRAVEL ADMIN/ENTITLE .....	42TAE .....	927 .....	24

**SAFETY**

<b><u>COURSE TITLE</u></b>	<b><u>COURSE NUMBER</u></b>	<b><u>CONTROL NUMBER</u></b>	<b><u>SCHOOL CODE</u></b>
RADIOLOGICAL SAFETY .....	59RAS .....	906 .....	21
OPER RADIATION SAFE .....	59ORS .....	907 .....	21

**SECURITY**

<b><u>COURSE TITLE</u></b>	<b><u>COURSE NUMBER</u></b>	<b><u>CONTROL NUMBER</u></b>	<b><u>SCHOOL CODE</u></b>
BASIC INDUS SCTY SP .....	.....	671 .....	9
COMSEC CUSTODIAN .....	51SCC .....	973 .....	30
DOD SECURITY SPEC .....	55DSS .....	677 .....	9
HOSTAGE NEGOTIATIONS .....	.....	949 .....	23
INDUS SCTY EX SEM .....	.....	669 .....	9
INDUS SCTY MGT .....	.....	670 .....	9
INFO SCTY ORIEN .....	.....	673 .....	9
INFO SCTY MGT .....	55ISM .....	674 .....	9
PERS SCTY INVES .....	55PSI .....	675 .....	9
PHYS SEC/CRIME PREV .....	55CPC .....	910 .....	23
SCTY ASST MGT-CONUS .....	.....	694 .....	12
SCTY ASST MGT-EX .....	.....	690 .....	12
SCTY ASST MGT-FIN .....	.....	691 .....	12
SCTY ASST MGT - FPE .....	.....	697 .....	12
SCTY ASST MGT - FTO .....	.....	692 .....	12
SCTY ASST MGT-OCONUS .....	.....	695 .....	12
SCTY ASST MGT - PROG .....	.....	693 .....	12
SCTY ASST MGT-TNG .....	.....	696 .....	12
COMBATING TERRORISM .....	55TMI .....	911 .....	23

LIST OF COURSES (Continued)

**TRANSPORTATION**

<b><u>COURSE TITLE</u></b>	<b><u>COURSE NUMBER</u></b>	<b><u>CONTROL NUMBER</u></b>	<b><u>SCHOOL CODE</u></b>
GEN TRANS HAZ MAT .....	56TPH .....	662 .....	8
HAZARDOUS MAT/WASTE HDLG .....	56HMH .....	831 .....	6
HAZARD PROP MGT .....	56HPM .....	836 .....	6
INSTL TRAF MGT HAZ .....	56THZ .....	663 .....	8
ECH TRANS HAZ MAT .....	56THM .....	664 .....	8

**TRANSPORTATION MANAGEMENT**

<b><u>COURSE TITLE</u></b>	<b><u>COURSE NUMBER</u></b>	<b><u>CONTROL NUMBER</u></b>	<b><u>SCHOOL CODE</u></b>
DEF ADV TRAFFIC MGT .....	45ATM .....	934 .....	25
INSTL TRAFFIC MGT .....	45ITM .....	935 .....	25
PASSENGER TRAVEL SPC .....	45PTS .....	937 .....	25
TRAF MGT CORR DINATOR .....		683 .....	25

**MISCELLANEOUS**

<b><u>COURSE TITLE</u></b>	<b><u>COURSE NUMBER</u></b>	<b><u>CONTROL NUMBER</u></b>	<b><u>SCHOOL CODE</u></b>
BASIC GEO SURVEYING .....	31BGS .....	971 .....	29
COST EST FOR ENGRS .....	35CEE .....	838 .....	6
DEC ANAL LOG .....	46DRL .....	840 .....	6
DECISION ANAL .....	46DRA .....	839 .....	6
LEAD TTT .....	48LDT .....	977 .....	31
MOBIL & DEPLOYMENT .....	46MDP .....	938 .....	31
ORG LEADERSHIP EX .....	12OLE .....	976 .....	31
RISK ANALYSIS .....		841 .....	6
TECH CHEM SURETY MAT .....	56TCS .....	665 .....	8